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12 Attorneys for Plaintiffs

13 **UNITED STATES DISTRICT COURT**

14 **EASTERN DISTRICT OF CALIFORNIA**

15 **TOPFIRE LIMITED, a foreign company; HK
16 MIUSON INTERNATIONAL CO., LIMITED, a
17 foreign company;
18 JIANGGONGXIUSHENZHENGUOJI-
19 MAOYIYOUXIANGONGSI, a foreign company;
20 foreign company; and
21 SHENZHENSILINGBINQIPEI-
22 YOUXIANGONGSI, a foreign company.**

23) Case No. 2:23-cv-02503-DAD-JDP
24)
25) **DECLARATRION OF ALEXANDER
26) CHEN IN SUPPORT OF
27) PLAINTIFFS' RESPONSE TO
28) DEFENDANT' OPENING CLAIM
29) CONSTRUCTION BRIEF**

30 Plaintiffs,

31 v.

32 **BENJAMIN D. COOK., an individual; and DOES 1
33 through 10, inclusive.**

34 Defendants.

35 **AND RELATED CROSS-ACTIONS**

1 I, Alexander Chen, declare as follows:

2 1. I am an attorney at the law firm of InHouse Co. Law Firm, attorneys of record in this
3 action for Plaintiffs. I submit this declaration in support of Plaintiffs' Opening Claim Construction
4 Brief. Unless otherwise indicated, I have personal knowledge of the matters set forth below. If called as
5 a witness I could and would testify competently as follows:

6 2. Attached hereto as **Exhibit 1** to this Declaration is a true and correct copy of U.S. Patent
7 No. 11,772,539 ("Patent-in-suit").

8 3. Attached hereto as **Exhibit 2** to this Declaration is a true and correct copy of U.S. Patent
9 No. 11,660,995 ("Parent").

10 4. Attached hereto as **Exhibit 3** to this declaration is a true and correct copy of an Office
11 Action, dated March 3, 2023, for Nonprovisional application Ser. No. 17/592,418, filed February 3,
12 2022, bearing Bates Numbers PLA001252-PLA001264, excerpted from the produced file history of
13 U.S. Patent No. 11,660,995.

14 5. Attached here to as **Exhibit 4** to this declaration is a true and correct copy of U.S. Patent
15 No. 11,254,253 ("Fan").

16 6. Attached hereto as **Exhibit 5** to this declaration is a true and correct copy of a Response
17 to Office Action, dated February 3, 2022, bearing Bated Numbers PLA001226-PLA001250, excepted
18 from the produced files history of U.S. Patent No. 11,660,995.

19 7. Attached hereto as **Exhibit 6** is a true and correct copy of the definition of the word
20 "generally" as sourced from the Cambridge Online Dictionary.

21 8. Attached hereto as **Exhibit 7** is a true and correct copy of the definition of the word
22 "approximately" and "approximate" as sourced from the Merriam-Webster Online Dictionary.

23 9. Attached hereto as **Exhibit 8** is a true and correct copy of the definition of the word
24 "a number of" as sourced from the Merriam-Webster Online Dictionary.

25 10. Attached hereto as **Exhibit 9** is a true and correct copy of the definition of the word
26 "a number of" as sourced from the Collins Online Dictionary.

1 I declare under the penalty of perjury that the foregoing is true and correct. Executed this 18th
2 day of October, 2024, Orange County, California.

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7 By: _____
8 Alexander Chen, Esq.
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INHOUSE CO. LAW FIRM



Exhibit 1

(12) **United States Patent**
Cook

(10) **Patent No.:** **US 11,772,539 B2**
 (45) **Date of Patent:** ***Oct. 3, 2023**

(54) **CUPHOLDER AND ADAPTER FOR LARGE CONTAINERS DURING VEHICLE USE**

(71) Applicant: **Benjamin Cook**, Lincoln, CA (US)

(72) Inventor: **Benjamin Cook**, Lincoln, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **18/137,864**

(22) Filed: **Apr. 21, 2023**

(65) **Prior Publication Data**

US 2023/0256881 A1 Aug. 17, 2023

Related U.S. Application Data

(63) Continuation of application No. 17/592,418, filed on Feb. 3, 2022, now Pat. No. 11,660,995.

(60) Provisional application No. 63/146,581, filed on Feb. 6, 2021.

(51) **Int. Cl.**

B60N 3/10 (2006.01)

(52) **U.S. Cl.**

CPC **B60N 3/103** (2013.01); **B60N 3/105** (2013.01)

(58) **Field of Classification Search**

CPC B60N 3/103; B60N 3/105

USPC 224/544

See application file for complete search history.

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Primary Examiner — Nathan J Newhouse

Assistant Examiner — Lester L Vanterpool

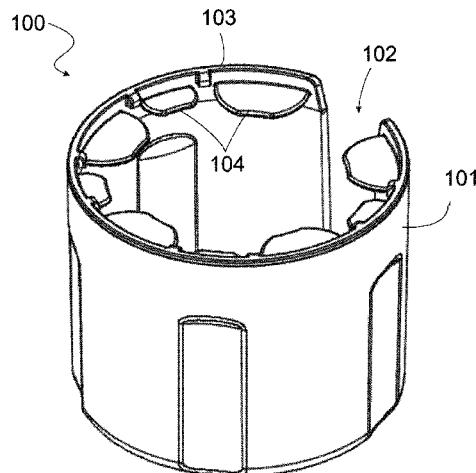
(74) *Attorney, Agent, or Firm* — My Patent Guys;

Christopher Pilling

(57) **ABSTRACT**

A cupholder adapter configured for use with an existing cupholder on a vehicle is provided. The cupholder adapter includes a cylindrical cupholder having a hollow internal volume, a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume, and an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter. The plurality of tabs includes tabs of different lengths and widths which enables and accommodates wide, tall, and narrow beverage containers during vehicle use. The adapter base is configured to install into the recessed cupholder near the console of most vehicles.

7 Claims, 16 Drawing Sheets



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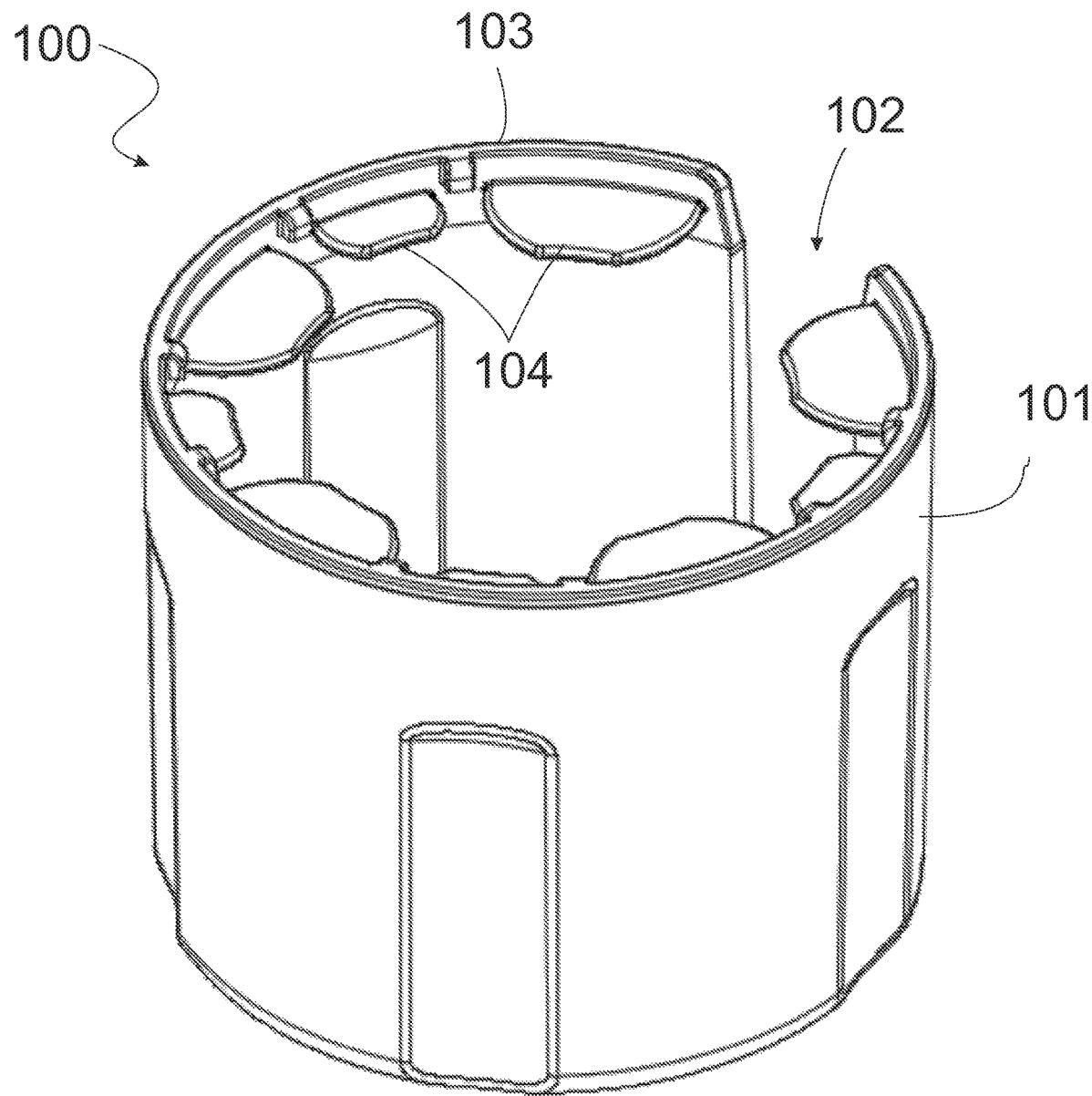


FIG. 1

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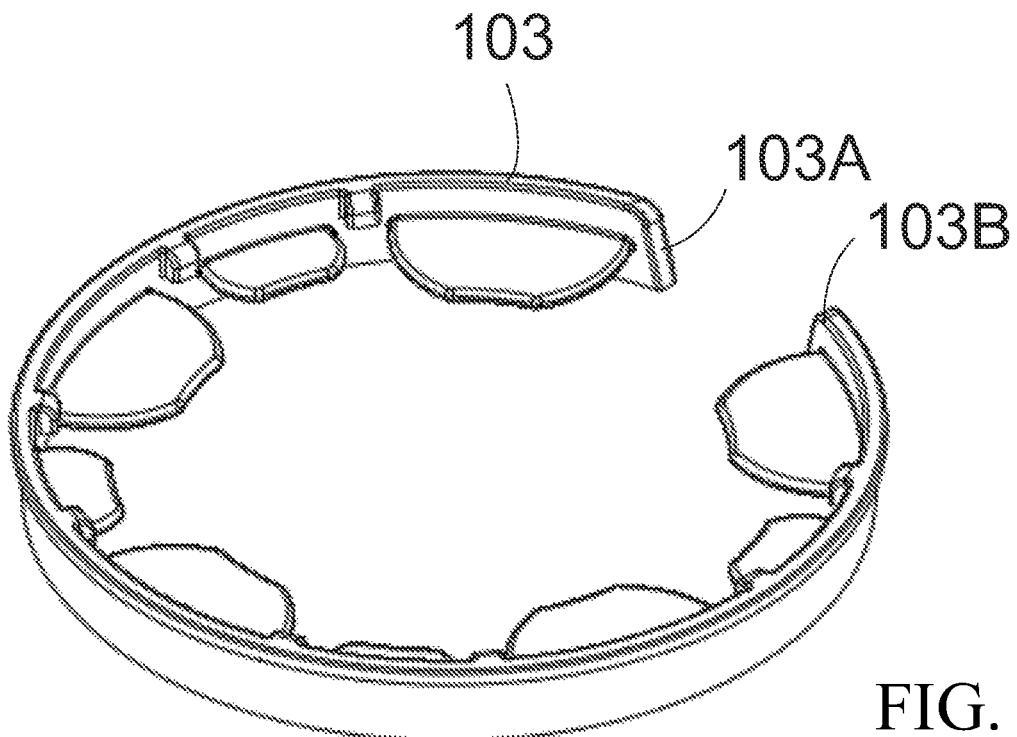


FIG. 2

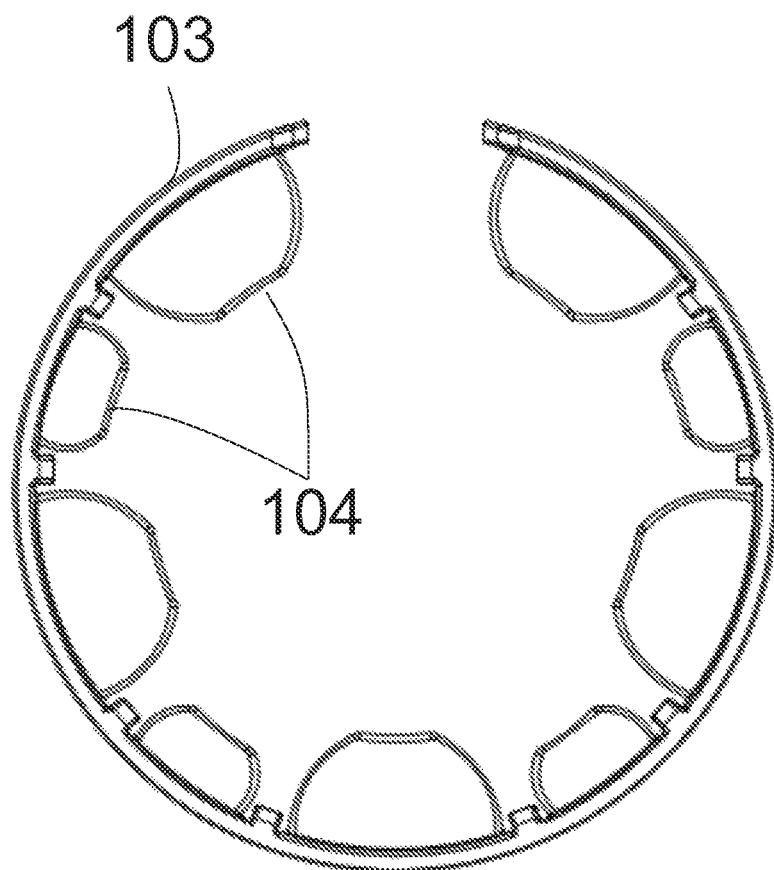


FIG. 3

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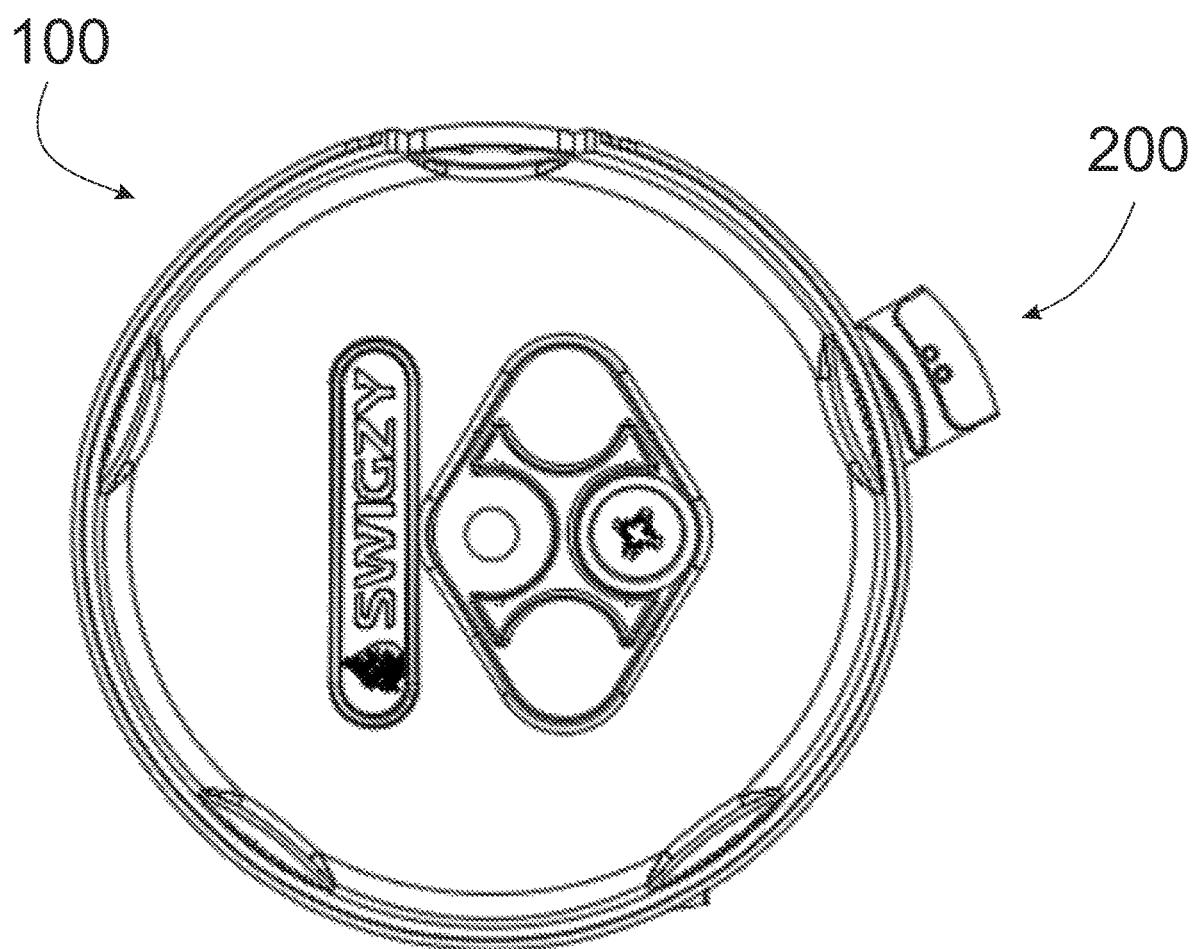


FIG. 4

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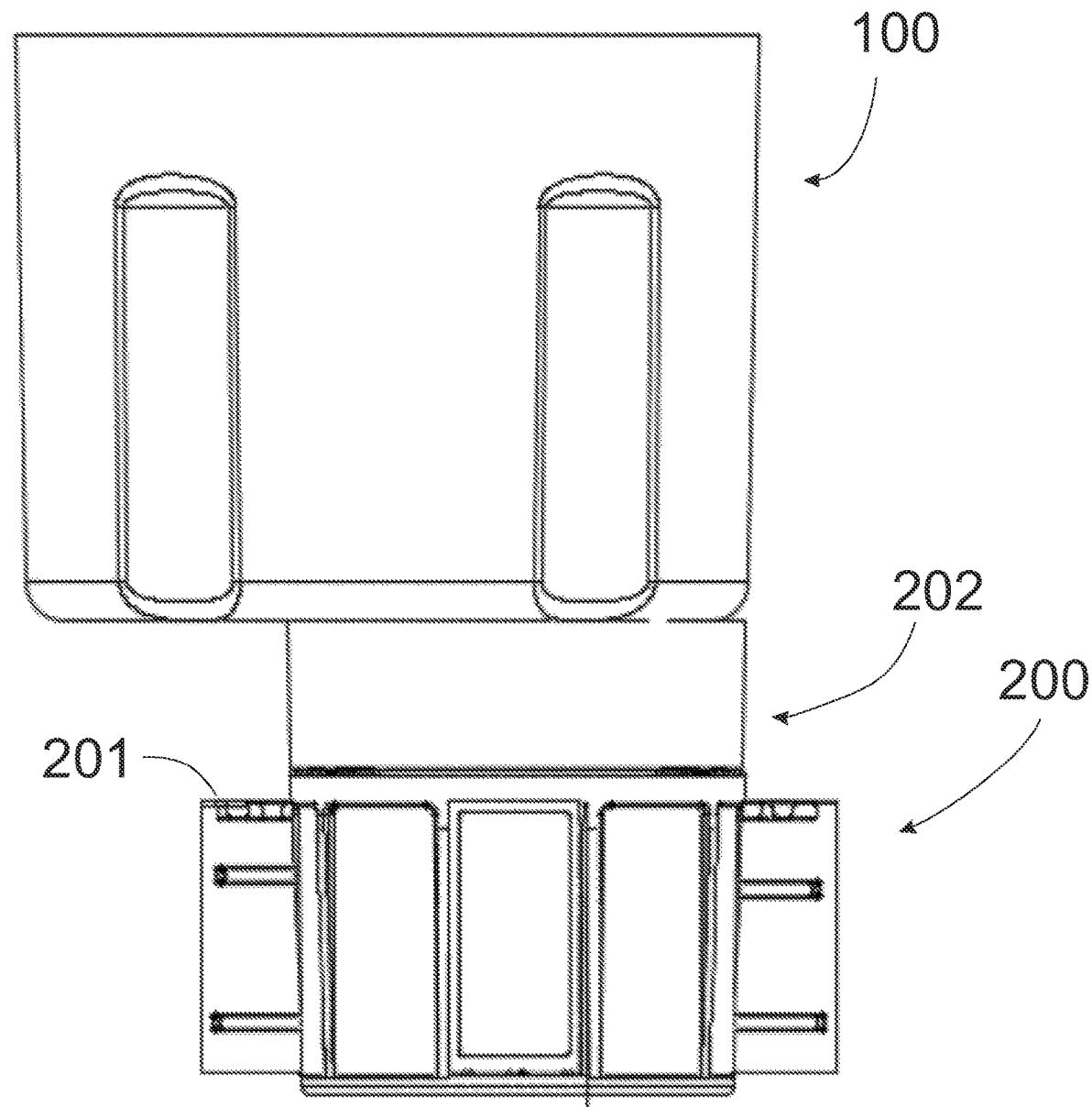


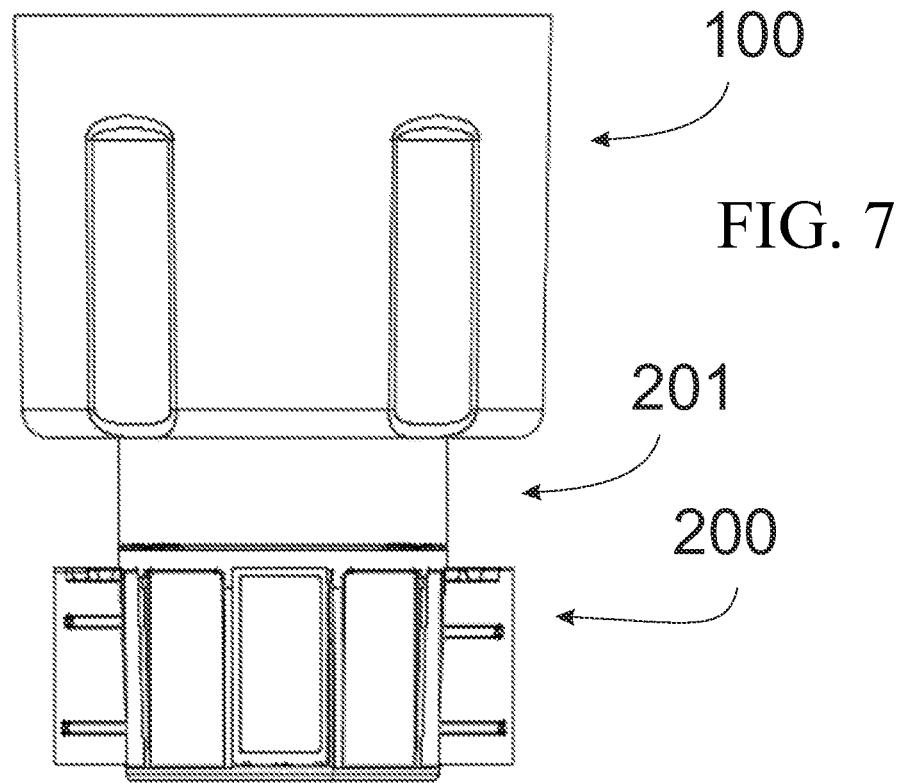
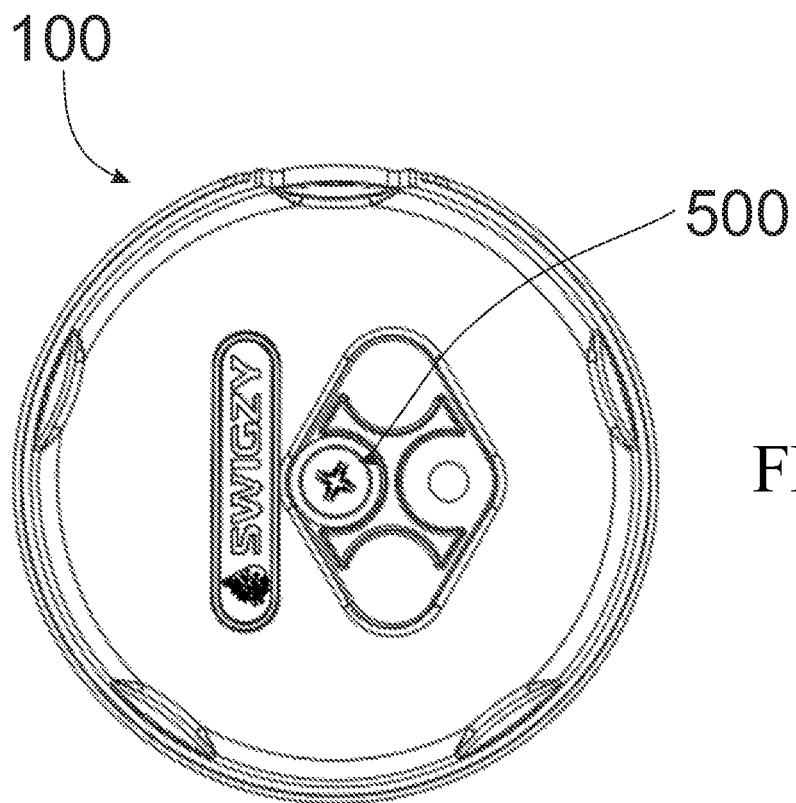
FIG. 5

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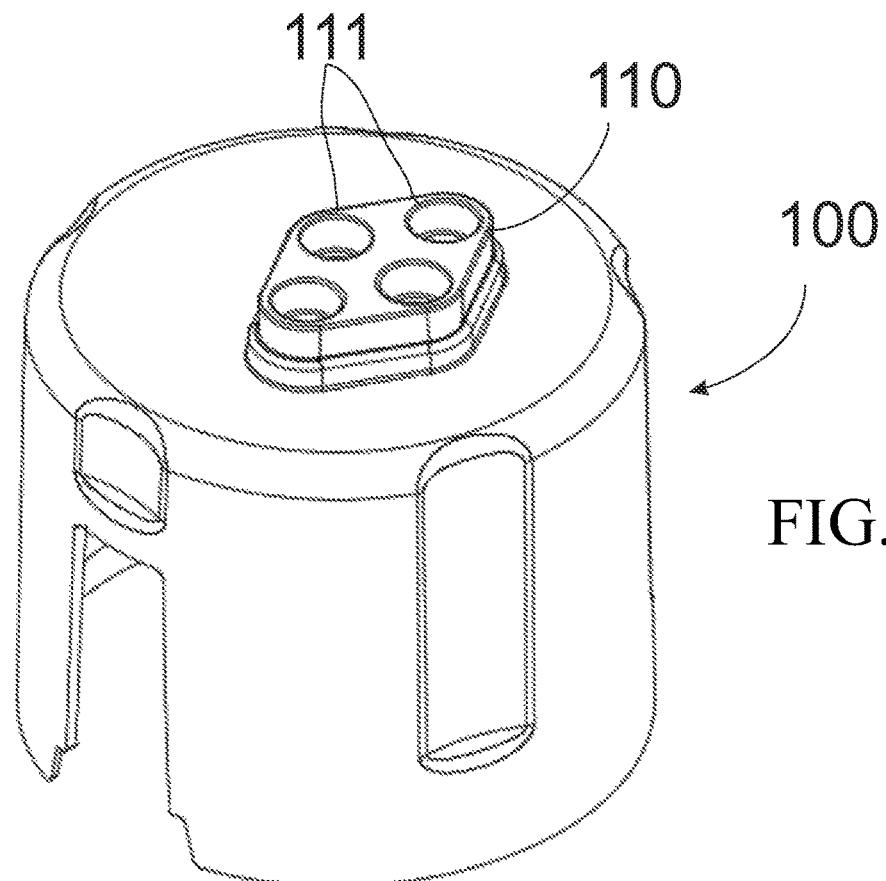


FIG. 8

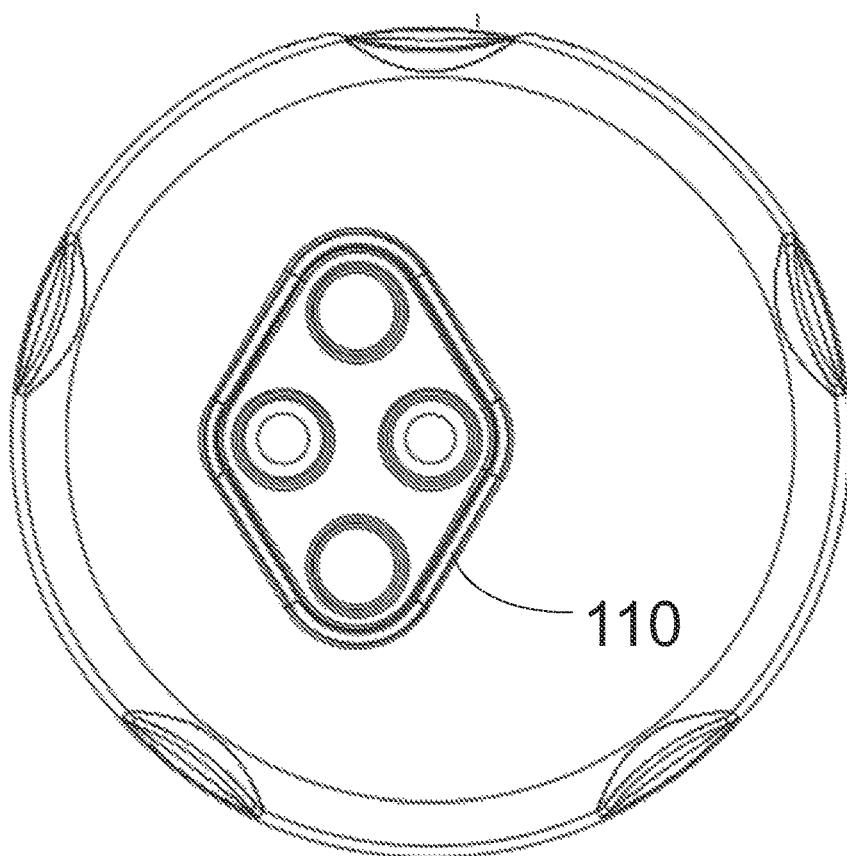


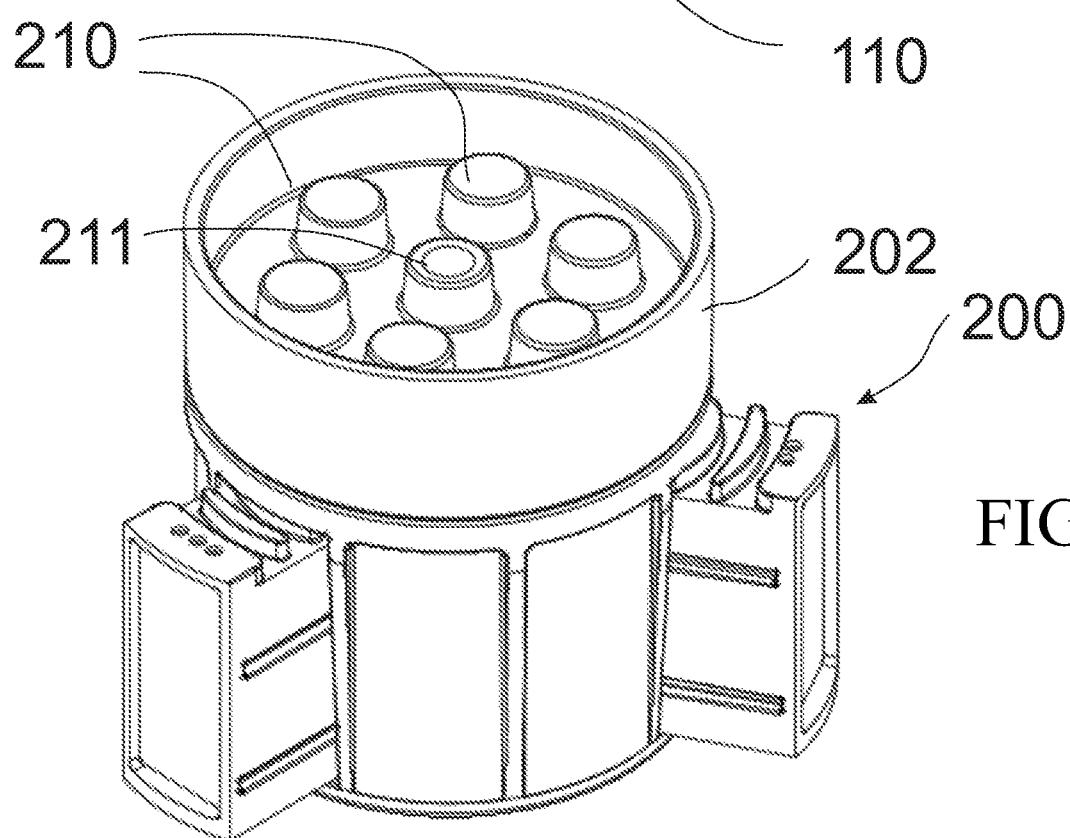
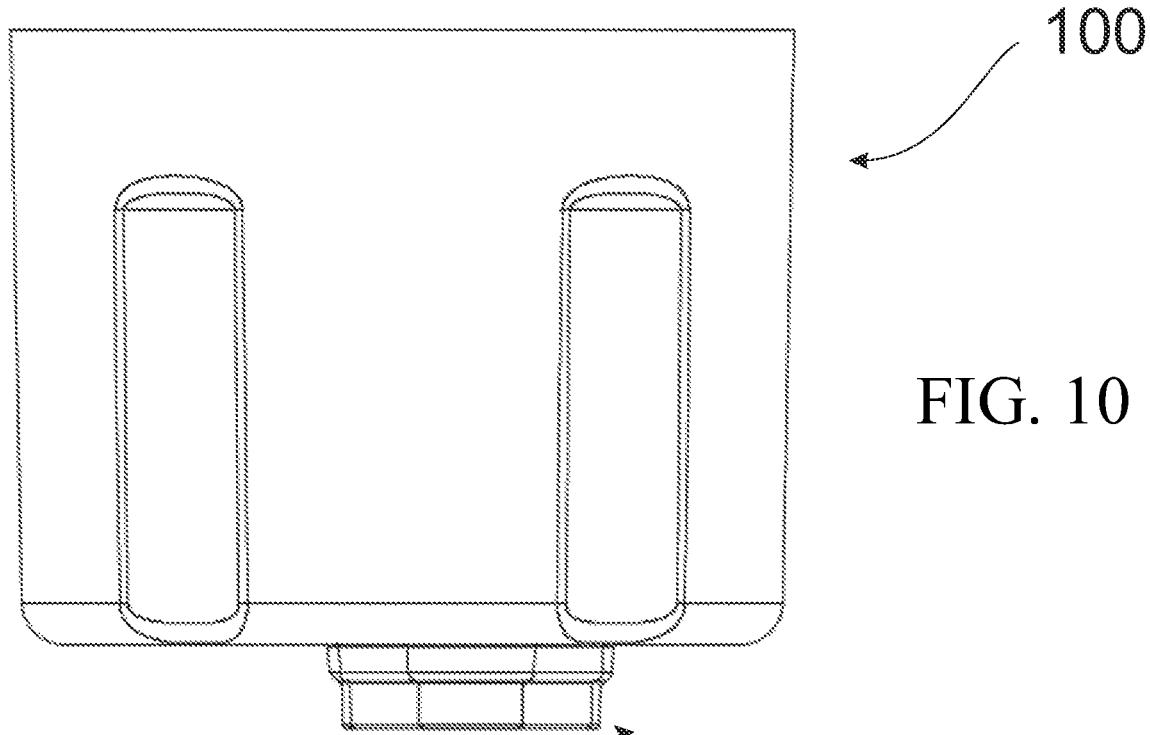
FIG. 9

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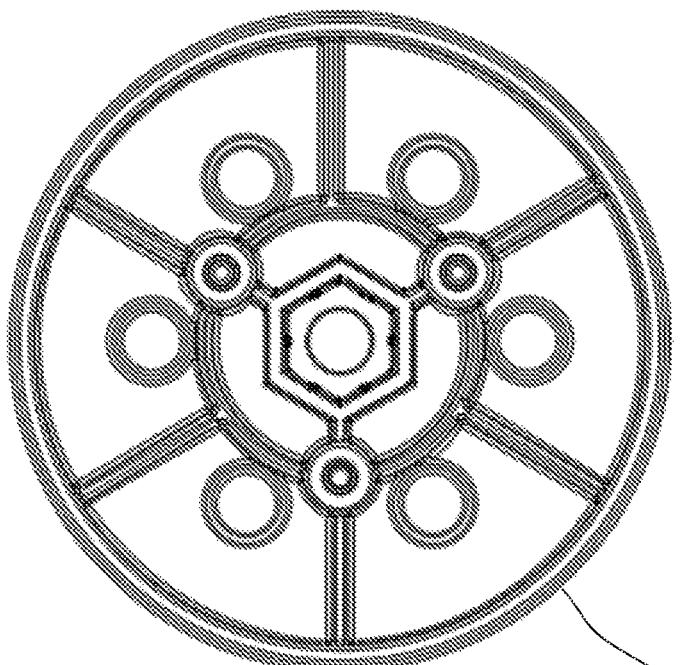
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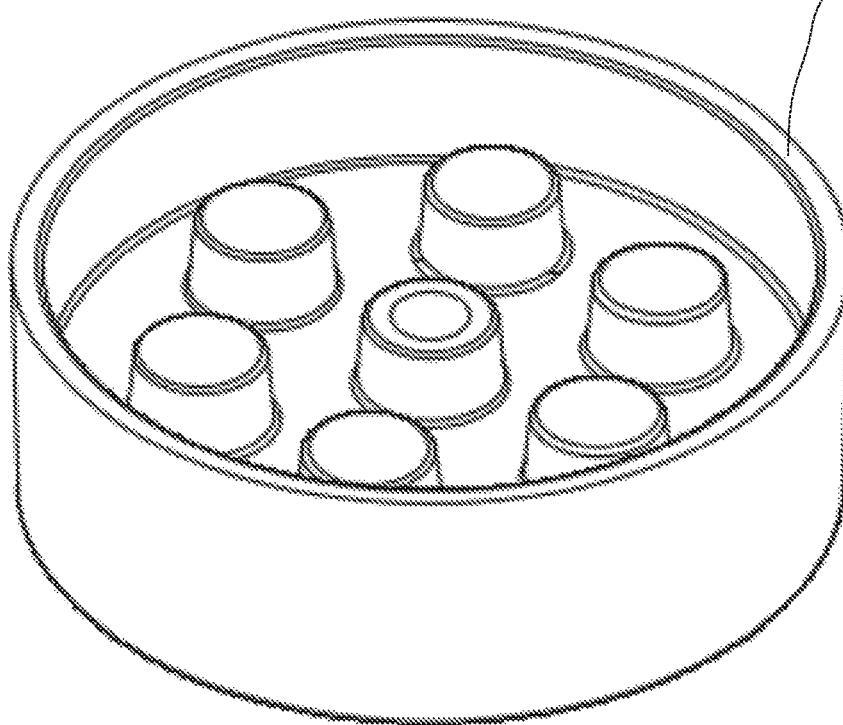
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FIG. 12



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FIG. 13



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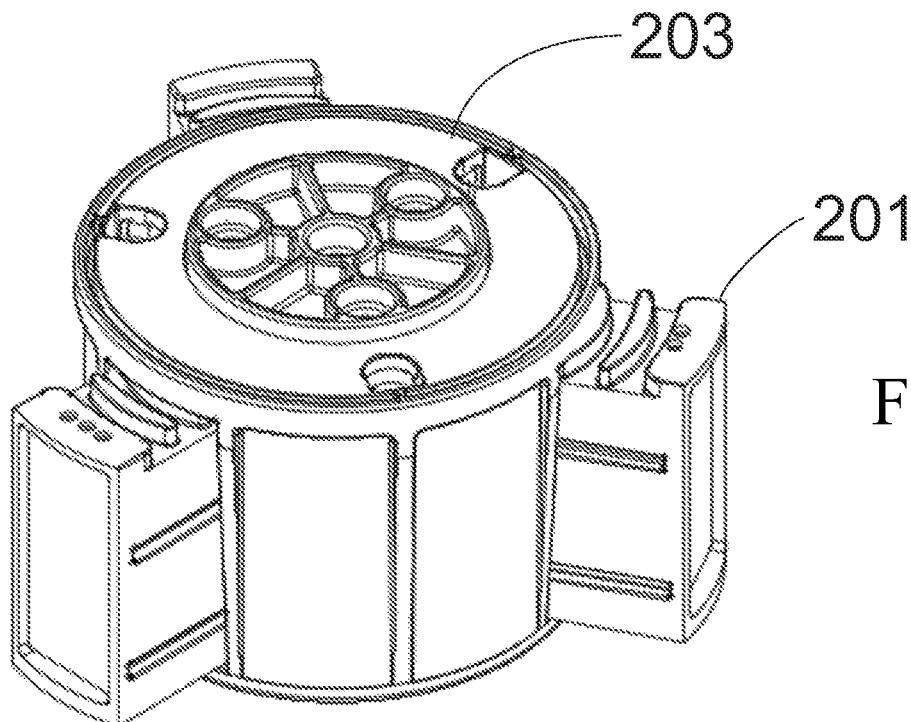


FIG. 14

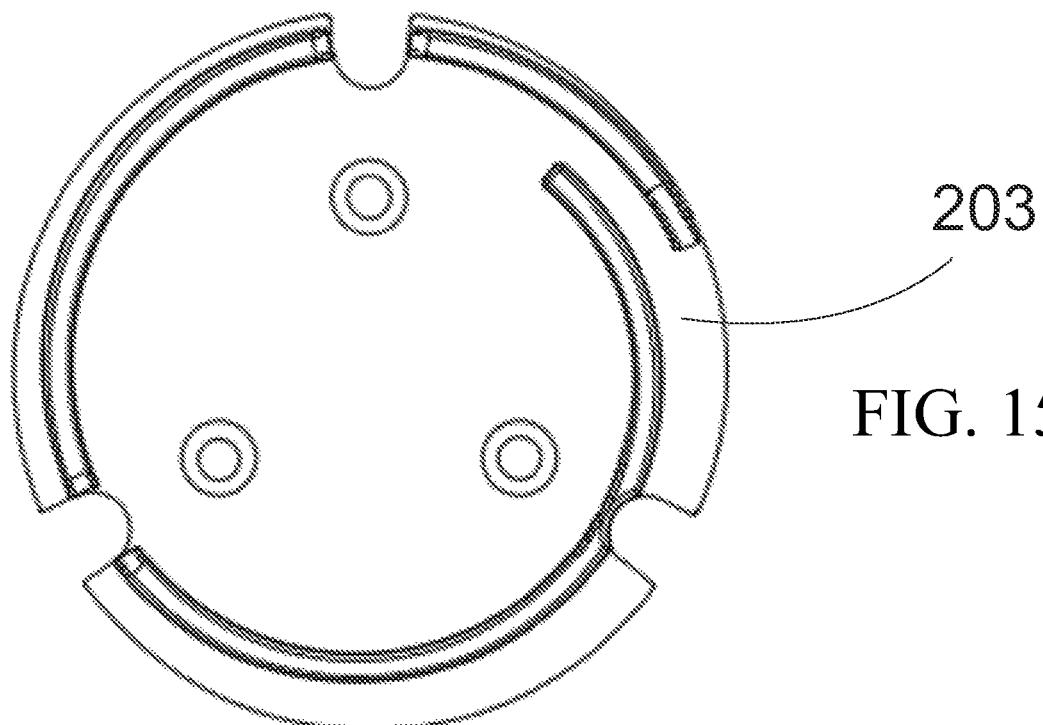


FIG. 15

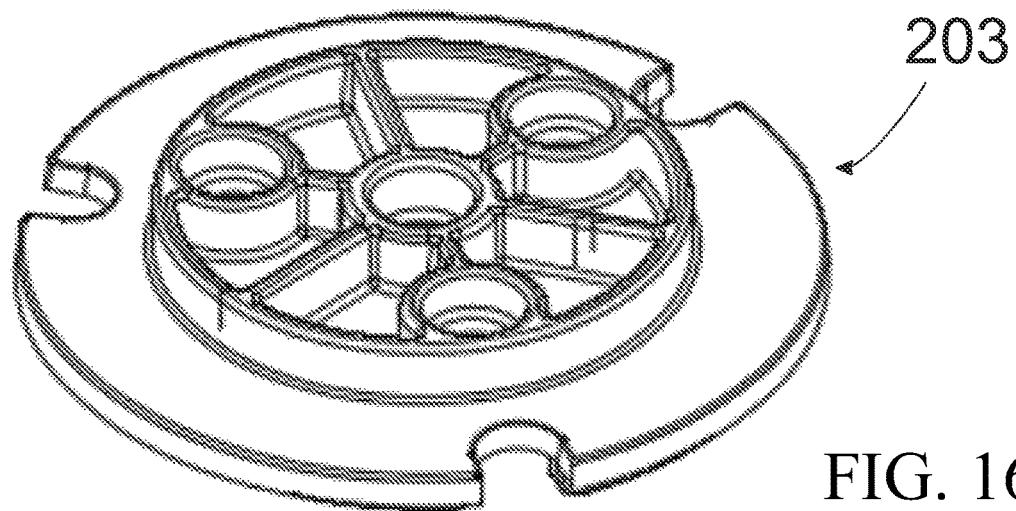


FIG. 16

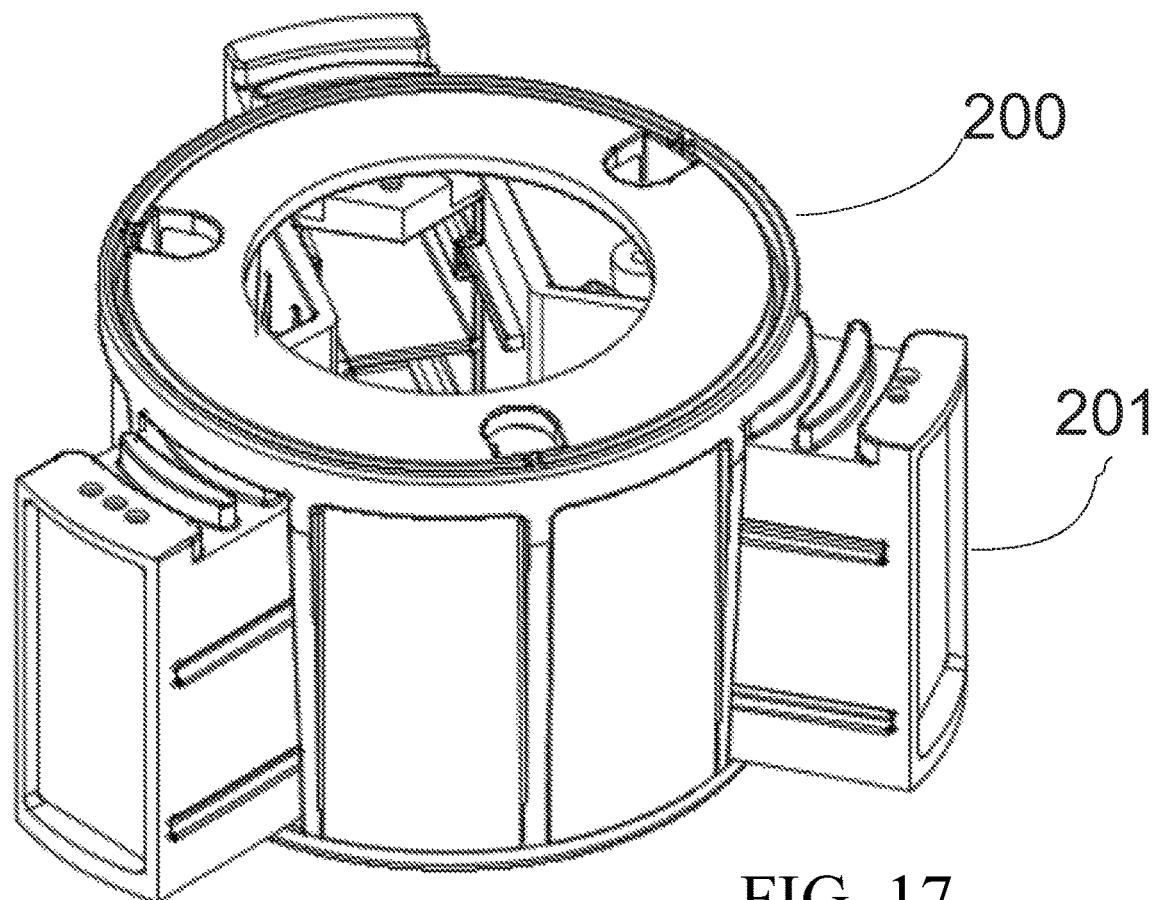


FIG. 17

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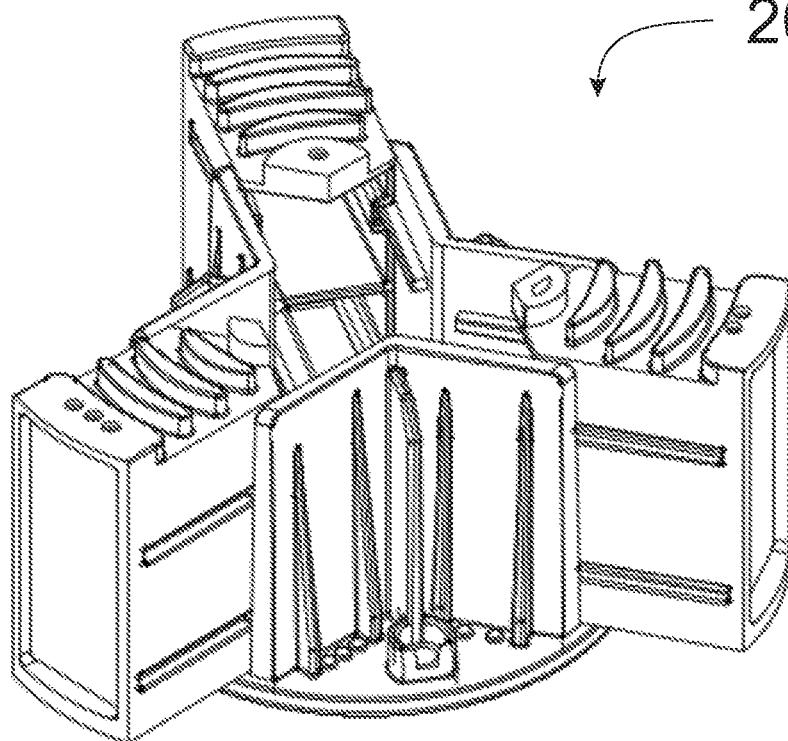
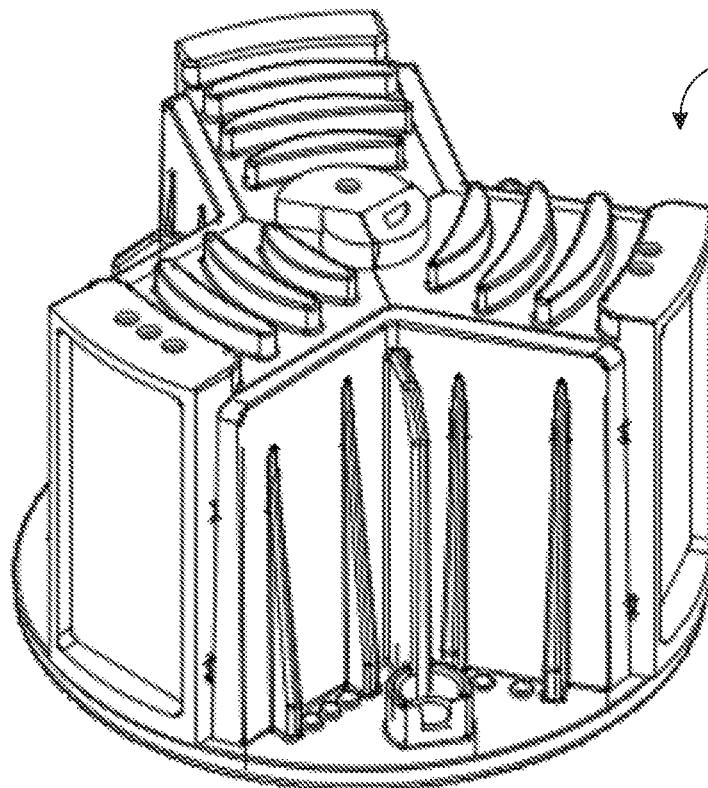


FIG. 18



201B

FIG. 19

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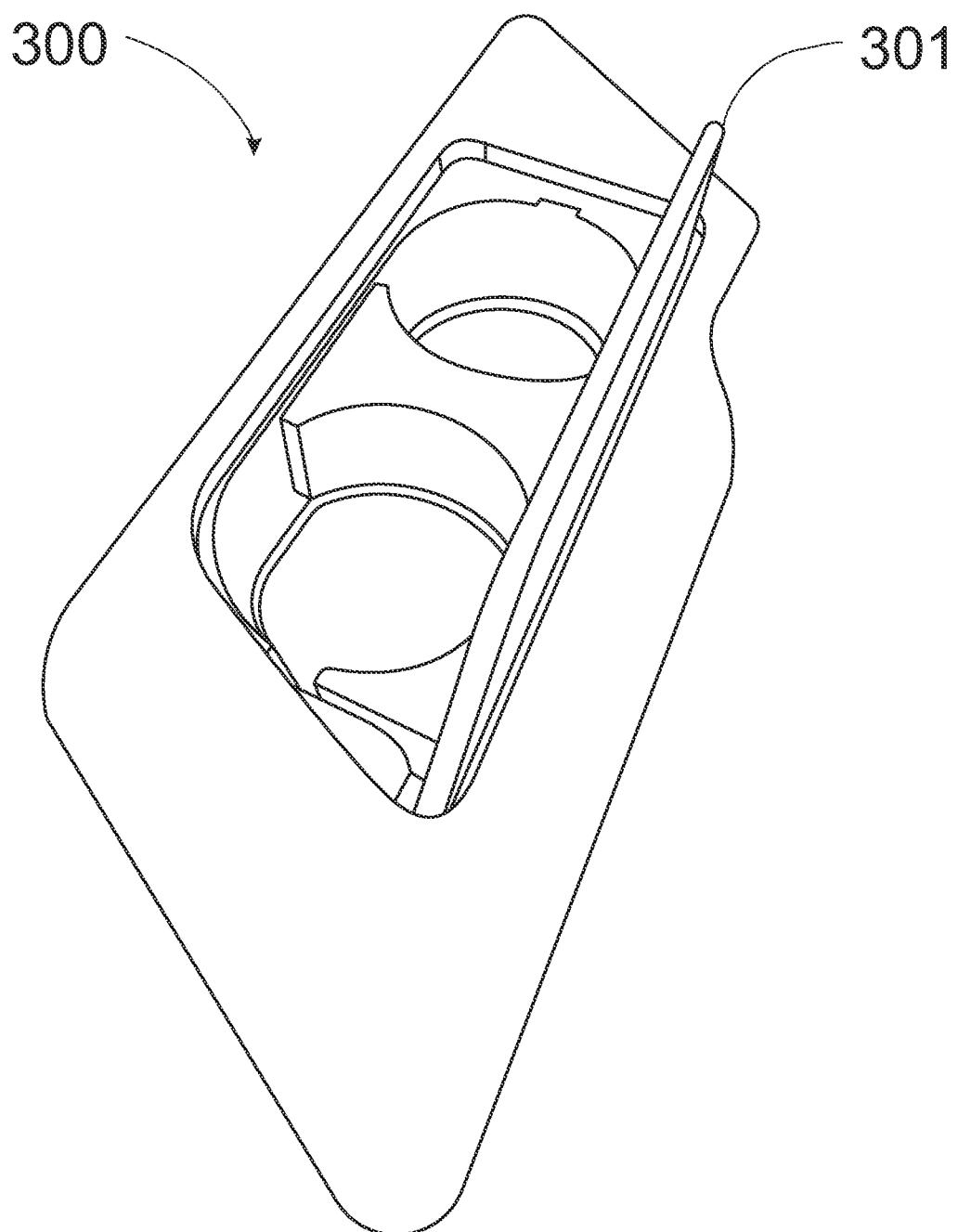


FIG. 20

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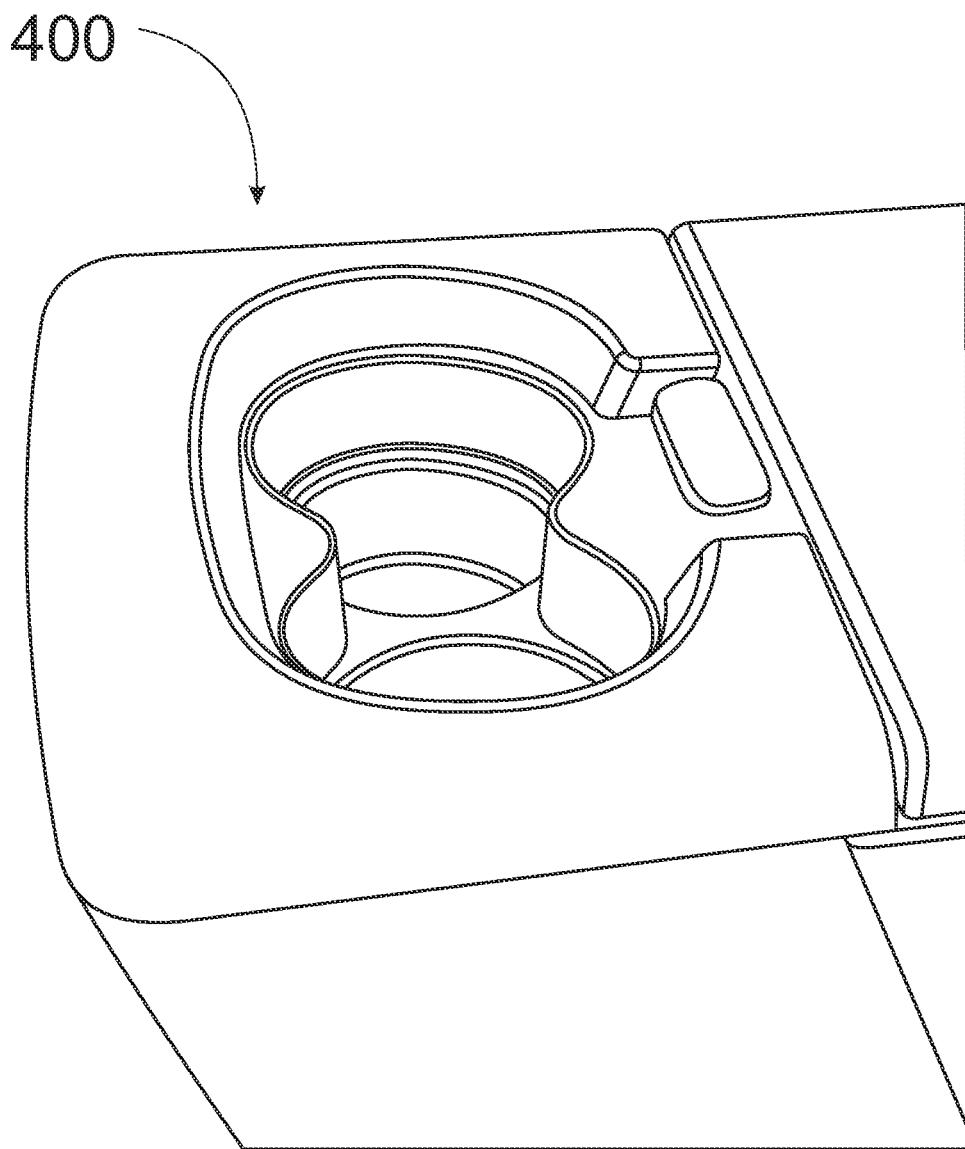


FIG. 21

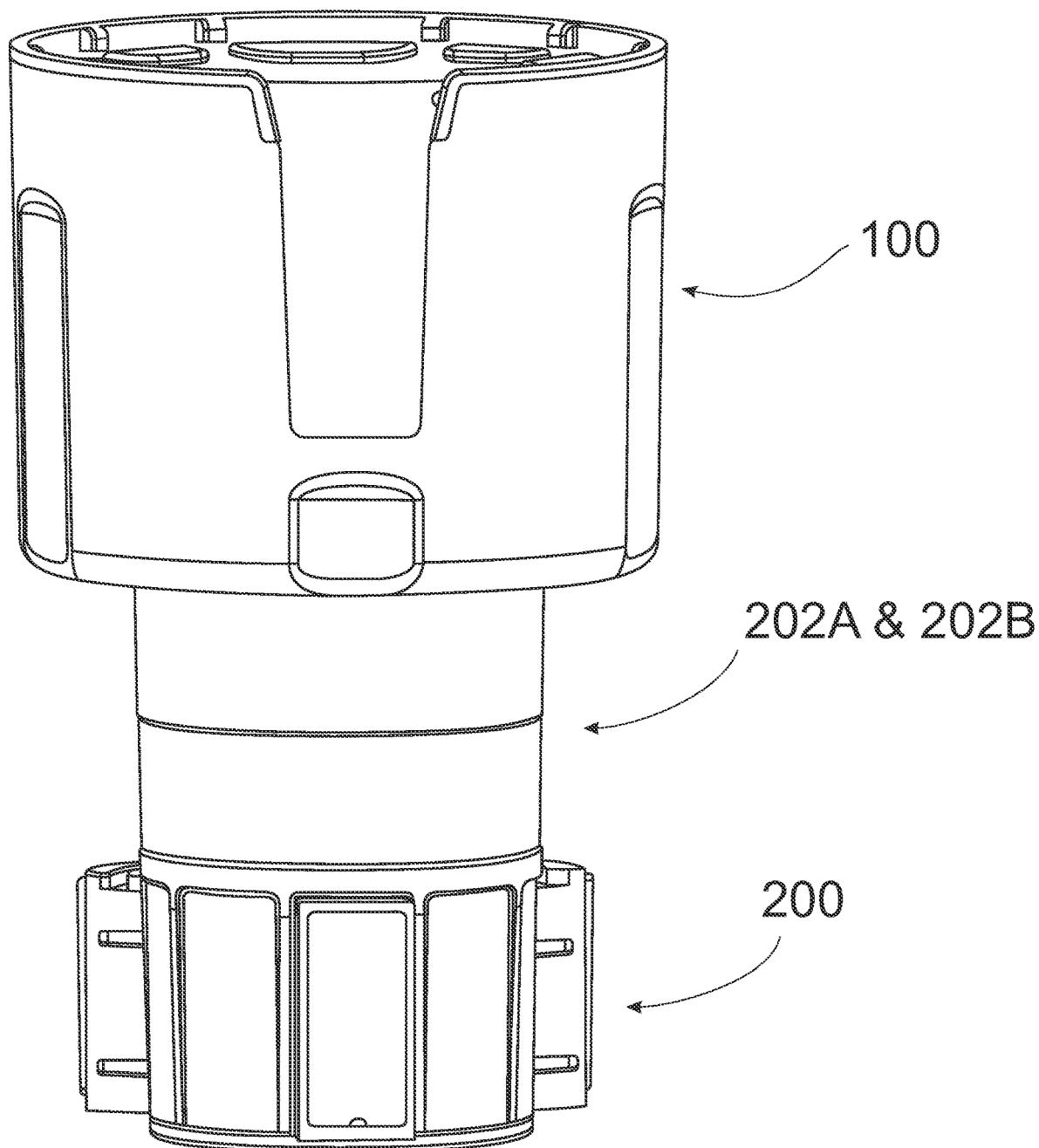


FIG. 22

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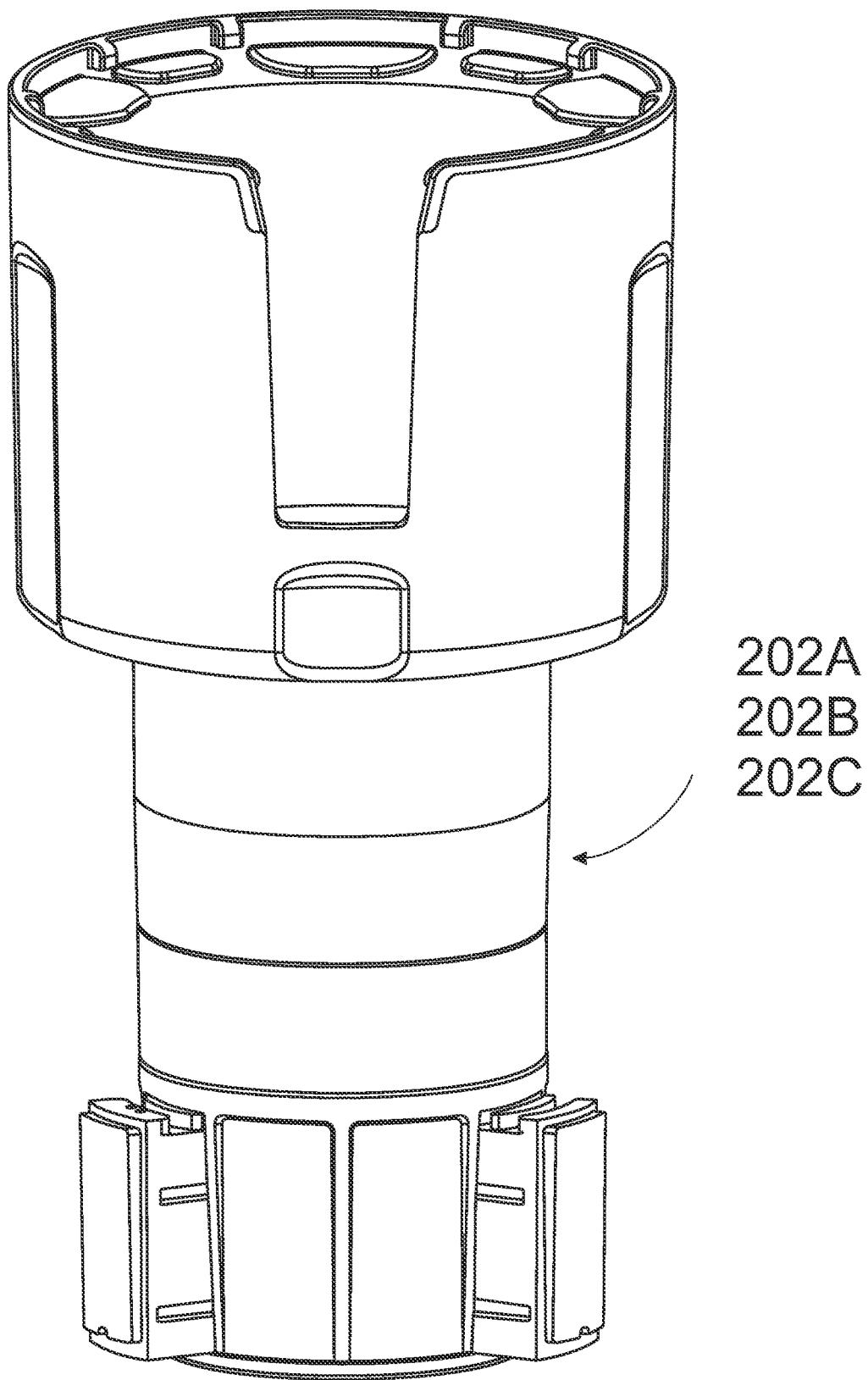


FIG. 23

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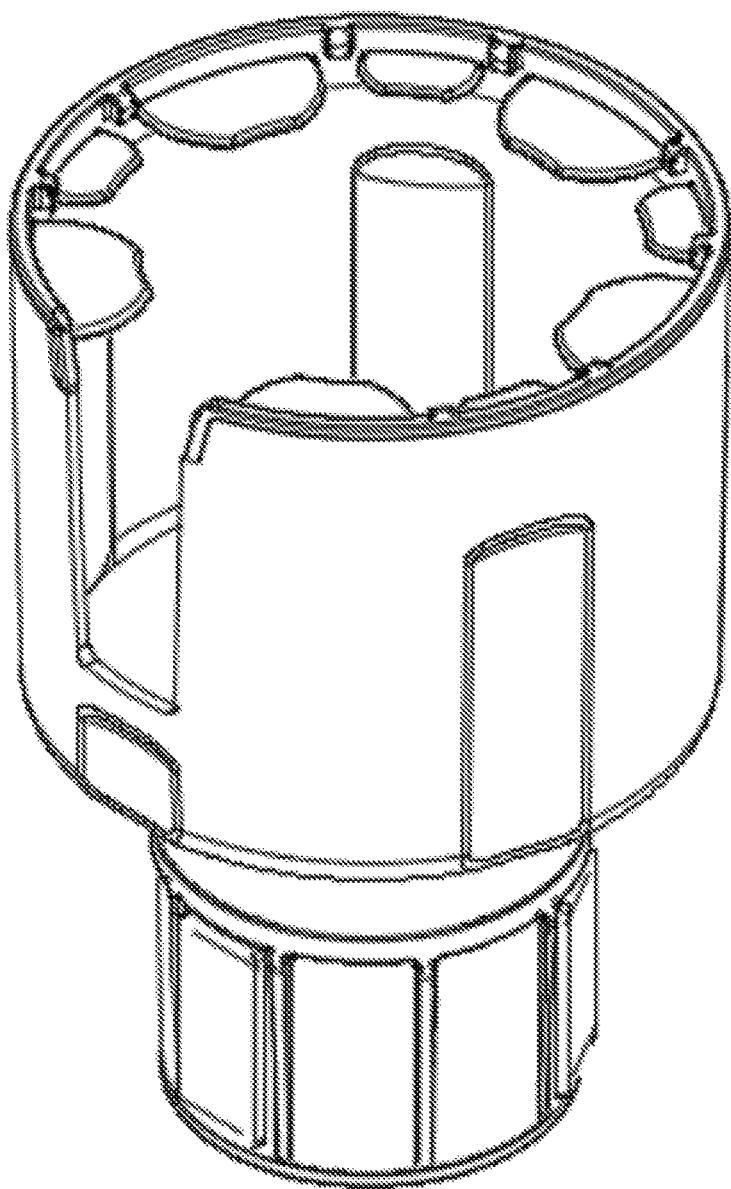


FIG. 24

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CUPHOLDER AND ADAPTER FOR LARGE CONTAINERS DURING VEHICLE USE**CROSS-REFERENCE TO RELATED APPLICATIONS**

The present application is a continuation to Nonprovisional application Ser. No. 17/92,418, filed Feb. 3, 2022 which claims priority to provisional application 63/146,581, filed on Feb. 6, 2021, the disclosure of which is hereby incorporated in its entirety at least by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to cupholders but more particularly to a cupholder and adapter for large containers during vehicle use.

2. Description of Related Art

Cupholders provided by most motor vehicles are recessed into a center console area or dashboard area of the vehicle. The cupholders are several inches in diameter and fully accommodate narrow and short containers such as disposable cardboard beverage cups and standard carbonated soda cans. Taller or wider containers either cannot fit at all or fit in a manner wherein the container may tip over or rattle about. Such problems may lead to spillage and potential danger to the vehicle and its occupants. Consequently, a cupholder and adapter for large containers during vehicle use is provided.

BRIEF SUMMARY OF THE INVENTION

The following presents a simplified summary of some embodiments of the invention in order to provide a basic understanding of the invention. This summary is not an extensive overview of the invention. It is not intended to identify key/critical elements of the invention or to delineate the scope of the invention. Its sole purpose is to present some embodiments of the invention in a simplified form as a prelude to the more detailed description that is presented later.

In one aspect of the invention, a cupholder adapter configured for use with an existing cupholder on a vehicle is provided, the cupholder adapter comprising a cylindrical cupholder having a hollow internal volume; a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume; an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter.

In one embodiment, the plurality of legs are configured to expand and retract via rotation of the cupholder. In one embodiment, the cylindrical cupholder is configured to be coupled to the adapter base in a variety of configurations including, at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis. In another embodiment, an attachment member positioned on a bottom surface of the cylindrical cupholder is provided, wherein the attachment member enables the coupling of the adapter base and the cylindrical cupholder via a mounting

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spacer attached to the adapter base. In one embodiment, the attachment member comprises a number of mounting holes and the mounting spacer comprises a number of protrusions including a central protrusion having a hole, wherein a mounting hole of the number of mounting holes is configured to align with the central protrusion such that a fastener can extend through the mounting hole and the hole of the central protrusion. In another embodiment, the number of mounting holes of the attachment member enables multiple configuration of the cylindrical cupholder in relation to the adapter base including an aligned configuration and off-set configuration. In one embodiment, at least one spacer positioned between the cylindrical cupholder and the adapter base is provided. In one embodiment, a screw gear is provided to enable the movement of the plurality of legs via rotation. In one embodiment, the minimum diameter is approximately 2.6 inches and the maximum diameter is approximately 3.8 inches. In one embodiment, the plurality of tabs comprises tabs of varying length and width.

In another aspect of the invention, a cupholder adapter configured for use with an existing cupholder on a vehicle is provided, the cupholder adapter comprising a cylindrical cupholder having a hollow internal volume; an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter.

In yet another aspect of the present invention, a cupholder adapter configured for use with an existing cupholder on a vehicle is provided, the cupholder adapter comprising a cylindrical cupholder having a hollow internal volume; an adapter base coupled to the cylindrical cupholder; and, wherein the cylindrical cupholder is configured to be coupled to the adapter in at least two configurations: (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and, (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

The foregoing has outlined rather broadly the more pertinent and important features of the present disclosure so that the detailed description of the invention that follows may be better understood and so that the present contribution to the art can be more fully appreciated. Additional features of the invention will be described hereinafter which form the subject of the claims of the invention. It should be appreciated by those skilled in the art that the conception and the disclosed specific methods and structures may be readily utilized as a basis for modifying or designing other structures for carrying out the same purposes of the present disclosure. It should be realized by those skilled in the art that such equivalent structures do not depart from the spirit and scope of the invention as set forth in the appended claims.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

Other features and advantages of the present invention will become apparent when the following detailed description is read in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a cupholder according to an embodiment of the invention.

FIG. 2 is a perspective view of the collar of the cupholder of FIG. 1.

FIG. 3 is a top view of FIG. 2.

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FIG. 4 is a top view of the cupholder mounted off-center from the adapter according to an embodiment of the present invention.

FIG. 5 is a side view of FIG. 4.

FIG. 6 is a top view of the cupholder mounted in the center of the adapter according to an embodiment of the present invention.

FIG. 7 is a side view of FIG. 6.

FIG. 8 is a perspective bottom view of the cupholder showing the attachment member according to an embodiment of the present invention.

FIG. 9 is a bottom view of FIG. 8.

FIG. 10 is a side view of the cupholder showing the attachment member according to an embodiment of the present invention.

FIG. 11 is a perspective view of the adapter with a mounting spacer according to an embodiment of the present invention.

FIG. 12 is a bottom view of the mounting spacer according to an embodiment of the present invention.

FIG. 13 is a perspective view of FIG. 12.

FIG. 14 is a perspective view of the adapter showing the scroll gear according to an embodiment of the present invention.

FIG. 15 is a bottom view of the scroll gear showing the scroll thread according to an embodiment of the present invention.

FIG. 16 is a top view of the scroll gear according to an embodiment of the present invention.

FIG. 17 is a perspective view of the adapter with the legs expanded according to an embodiment of the present invention.

FIG. 18 is a cutaway view of the legs expanded.

FIG. 19 is a cutaway view of the legs retracted.

FIG. 20 is an exemplary of a manufacturer-installed cupholder in a vehicle showing a lid partially blocking the cupholder.

FIG. 21 is an exemplary of a manufacturer-installed deep cupholder in a vehicle.

FIG. 22 is a perspective view of the present invention with two spacers installed according to an embodiment of the present invention.

FIG. 23 is a perspective view of the present invention with three spacers installed according to an embodiment of the present invention.

FIG. 24 is a perspective view of the present invention with one spacer installed according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

The following description is provided to enable any person skilled in the art to make and use the invention and sets forth the best modes contemplated by the inventor of carrying out his invention. Various modifications, however, will remain readily apparent to those skilled in the art, since the general principles of the present invention have been defined herein to specifically provide a cupholder and adapter for large containers during vehicle use.

It is to be understood that the terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting. The terms "a" or "an," as used herein, are defined as to mean "at least one." The term "plurality," as used herein, is defined as two or more. The term "another," as used herein, is defined as at least a second or more. The terms "including" and/or "having," as used

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herein, are defined as comprising (i.e., open language). The term "coupled," as used herein, is defined as connected, although not necessarily directly, not necessarily mechanically, and not permanent. The term "providing" is defined herein in its broadest sense, e.g., bringing/coming into physical existence, making available, and/or supplying to someone or something, in whole or in multiple parts at once or over a period of time. As used herein, the terms "about," "generally," or "approximately" apply to all numeric values, whether or not explicitly indicated. These terms generally refer to a range of numbers that one of skill in the art would consider near the stated amount by about 0%, 5%, or 10%, including increments therein. In many instances these terms may include numbers that are rounded to the nearest significant figure.

Referring now to accompanying FIGS. 1-3, a cupholder 100 of the present invention is illustrated. In one embodiment, the cupholder 100 comprises a generally cylindrical housing 101 having a gap 102 enabling the use of beverage containers having handles to be used. In one embodiment, the cupholder 100 includes a collar 103 having a plurality of tabs 104, wherein the plurality of tabs 104 are of differing sizes and lengths. The plurality of tabs of differing lengths and widths are attached at the top of the cupholder via the collar and point horizontally inward toward the center area of the cupholder. Advantageously, as the tabs are of varying lengths, they are configured to promote stabilization of beverage containers, such as travel cups, water bottles, juice bottles, and carbonated beverage cans of varying widths. The shorter tabs are configured to stabilize cups and cans that are relatively wide. By contrast, the adjacent tabs that are long and extend further inward stabilize containers that are narrow and that might otherwise tip or rattle about while the vehicle is in motion.

Further, the tabs are sufficiently wide to hold large and wide containers that may be too wide to fit in the standard cupholder provided by many motor vehicles. With its width and the aforementioned tabs of varying lengths along with an adapter base that is configured to fit into the cupholder of most vehicles, the cupholder provided herein can accommodate many wide containers and hold them steady as a vehicle rounds corners and encounters rough surfaces. This will be discussed in greater details below.

In one embodiment, the cupholder 100 is configured to hold containers up to approximately 3.85" in diameter, as well as containers down to approximately 2.8" in diameter. In addition, the cupholder provides better support for tapered bottles.

In one embodiment, the plurality of tabs 104 are constructed from a thin, flexible material, such that they may bend fairly easily when a bottle is inserted. In one embodiment, the tabs are constructed of rubber. Otherwise, it would be difficult to insert or remove the bottle. The majority of rubber tabs/flaps in the prior art protrude in a perpendicular manner and are bent down when a bottle is inserted. However, if the tabs remain unbent, and can stay perpendicular to the side of the container, it provides significantly more support for the container and help prevent tipping even when the host vehicle may be turning or braking hard. Thus, the tabs of the present invention are configured to remain unbent and remain perpendicular to the side of the container during use. In one embodiment, the plurality of tabs include a large tab and a small tab, wherein the large tab is approximately 31 mm wide and 16 mm long (at the longest point where the tab extends toward center area of the cupholder) and the

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small tab is approximately 19 mm wide and 9.5 mm long. In one embodiment, the thickness of the plurality of tabs is approximately 1.75 mm.

Advantageously, with multiple length tabs, the cupholder 100 is configured to be used with almost any size bottle without having to make adjustments. The size of the bottle will determine which tabs stay perpendicular and which tabs bend. In some instances, some bottles may end up slightly off-center and a combination of some of the large tabs and some small tabs will stay perpendicular and provide support.

Referring now to FIGS. 4-5, the cupholder 100 is shown attached to an adapter 200, wherein the attachment is offset. The adapter 200 is configured to act as the base for the cupholder 100. Advantageously, the adapter 200 acts as a base having extendable and retractable leg members 201 enabling the adapter to fit into the existing cupholder of the hosting vehicle (such as the cupholders shown in FIGS. 20 and 21). The adapter 200 may be manipulated to tighten (via extending the leg members 201) within the cupholder of the vehicle and provide stability. This will be discussed in further details below. In one embodiment, a spacer 202 is positioned between the adapter 200 and cupholder 100. The spacer 202 enables the cupholder 100 to be free of an existing cupholder's dimensions. In some embodiments, more than one spacer may be used. This will be discussed in further details below.

As seen in FIG. 20, in some situations, existing cupholders 300 often have an obstruction such as lid 30 that limits the use of some beverage containers from being used. Thus, the cupholder 100 of the present invention may be off-set from the adapter to avoid the obstructions. That is, the cupholder is not symmetrically positioned above the adapter, wherein the axis of the cupholder is not aligned with the axis of the adapter. This functionality permits the adapter 200 to be installed firmly into the vehicle's own cupholder (such as 300) but for the cupholder 100 provided herein to be moved "off to the side" or away from the obstruction or existing component of the vehicle that would otherwise be blocking the cupholder of the present invention. Alternatively, as shown in FIGS. 6 and 7 the cupholder 100 may be installed and aligned symmetrically over the adapter, i.e. not off-set.

Referring now to FIGS. 8-13, various views of the attachment member 110 and spacer 202 are illustrated. The method of attachment between the cupholder 100 and adapter 200 will be described below. In one embodiment, the cupholder 100 includes an attachment member 110 positioned on a bottom surface of the cupholder. In one embodiment, the attachment member 100 includes four mounting holes 111, wherein the holes 111 are configured to align with a number of protrusions 210 provided in spacer 202. The hole/protrusion combination determines how the cupholder 110 sits on the adapter, i.e. centered or off-set. In one embodiment, the attachment member 110 is offset, wherein a mounting hole is positioned in the center of the bottom surface of the cupholder (best seen in FIG. 9). Best seen in FIGS. 11 and 13, in one embodiment, the central protrusion of protrusion 210 includes a hole 211 such that a fastener 500 (FIG. 6) may be used to attach the cupholder to the spacer (and in turn the adapter). When the fastener is used, the other protrusions provide support with their connection to the corresponding mounting holes. In one embodiment, the fastener is a bolt, and a user would need to unscrew the bolt from the bottom of the cupholder 100, lift the cupholder off the spacer 202, and reposition the cupholder such that an "off center" hole on attachment member 110 is positioned over the center protrusion of protrusions 210 of the spacer. This action may enable the large and wide cupholder 100 to

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be securely positioned upright in the vehicle and not be blocked by the vehicle's console lid, emergency brake, gear shift, or other protruding component as shown in the arrangement of FIGS. 4-5. It should be understood, that although four mounting holes and eight corresponding protrusions are illustrated, the number of mounting holes and/or protrusions may vary.

Referring now to FIGS. 14-19, a mechanism of the adapter enabling the legs to expand and retract is illustrated. 10 As previously mentioned, it is a particular advantage of the present invention to provide an adapter 200 which acts a base for the cupholder of the present invention, wherein the adapter is configured to be positioned within an existing cupholder of a vehicle. In one embodiment, the adapter 200 15 comprises retractable and expandable legs 201 configured to press against the inside surface of the vehicle's cupholder. In one embodiment, the legs may be retracted or expanded via turning the coupled cupholder of the present invention. 20 Advantageously, this allows the adapter to fit more snugly within the existing cupholder providing stability. It also allows the adapter to be used in different sized cupholders, 25 wherein ultimately the present invention can accommodate a variety of beverage container sizes with a variety of vehicle cupholder sizes. The configurability allows beverage containers, in particular wide beverage containers, to be accommodated that otherwise would not fit in an existing vehicle cupholder, while providing features to ensure stability of the beverage within the cupholder and the adapter within the existing vehicle cupholder.

In one embodiment, a screw gear 203 is provided on a top portion of the adapter, wherein the top of the legs include gear teeth, such that the spiral-shaped thread engages the gear teeth causing the legs to horizontally expand or contract 35 depending on the direction of the rotation. The adapter and screw gear 203 is attached to the bottom of the spacer, which is attached to the cupholder, such that rotating the cupholder activates the screw gear 203. The fully contracted position 201B is illustrated in FIG. 19, and the fully expanded position 201A is illustrated in FIG. 18. In one embodiment, 40 the legs enable the adapter base to vary in diameter between 2.6" to 3.8".

FIG. 20 shows a manufacturer-installed cupholder 300 in a vehicle showing a lid 301 partially blocking the cupholder. 45 Referring now to FIGS. 5 and 20, as previously mentioned, in this situation the cupholder 100 can be offset from the adapter base 200 such that their axes are not aligned. In this way, the cupholder 100 can avoid the obstruction of the lid 301.

FIG. 21 shows a manufacturer-installed deep cupholder 400 in a vehicle. Referring now to FIGS. 21-24, when faced with a deep cupholder 400, more spacers can be used to extend the distance between the adapter base 200 and cupholder 100. FIG. 22 shows two spacers 202A and 202B installed. Likewise, FIG. 23 shows three spacers 202A, 202B, and 202C used. In one embodiment, the spacers are attached to the adjacent spacer via mechanical hardware, such as a screw or bolt. In some embodiments, one screw or bolt may be used to join the multiple spacers. The number of spacers can be selected depending on the depth of the existing cupholder.

As one skilled in the art can appreciate, the present invention is adaptable for a variety of existing cupholder situations. Only a few exemplary existing cupholders were shown, but it should be understood that the present invention can be modified to accommodate approximately all of the existing cupholders on the market in a vehicle, wherein the

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vehicle includes cars, trucks, buses, golf carts, etc. while providing stability for the beverage.

Although the invention has been described in considerable detail in language specific to structural features, it is to be understood that the invention defined in the appended claims is not necessarily limited to the specific features described. Rather, the specific features are disclosed as exemplary preferred forms of implementing the claimed invention. Stated otherwise, it is to be understood that the phraseology and terminology employed herein, as well as the abstract, are for the purpose of description and should not be regarded as limiting. Therefore, while exemplary illustrative embodiments of the invention have been described, numerous variations and alternative embodiments will occur to those skilled in the art. Such variations and alternate embodiments are contemplated, and can be made without departing from the spirit and scope of the invention. For instance, although a screw gear is used to facilitate the functionality of the expandable and retractable legs, other methods may be used.

It should further be noted that throughout the entire disclosure, the labels such as left, right, front, back, top, bottom, forward, reverse, clockwise, counter clockwise, up, down, or other similar terms such as upper, lower, aft, fore, vertical, horizontal, oblique, proximal, distal, parallel, perpendicular, transverse, longitudinal, etc. have been used for convenience purposes only and are not intended to imply any particular fixed direction or orientation. Instead, they are used to reflect relative locations and/or directions/orientations between various portions of an object.

In addition, reference to "first," "second," "third," and etc. members throughout the disclosure (and in particular, claims) are not used to show a serial or numerical limitation but instead are used to distinguish or identify the various members of the group.

What is claimed is:

1. A cupholder adapter configured for use with an existing cupholder on a vehicle, the cupholder adapter comprising: a cylindrical cupholder having a hollow internal volume; a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume;

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an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter;

an attachment member positioned on a bottom surface of the cylindrical cupholder, wherein the attachment member enables the coupling of the adapter base and the cylindrical cupholder; and,

10 wherein the attachment member comprises a number of mounting holes and the adapter base or a spacer comprises a number of protrusions, at least one protrusion of the number of protrusions having a hole, wherein a mounting hole of the number of mounting holes is configured to align with the hole such that a fastener can extend through the mounting hole and the hole of the at least one protrusion of the number of protrusions.

2. The cupholder adapter of claim 1, wherein the plurality of legs are configured to expand and retract via rotation of the cupholder.

3. The cupholder adapter of claim 1, wherein the cylindrical cupholder is configured to be coupled to the adapter base in a variety of configurations including at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

4. The cupholder adapter of claim 1, wherein the number of mounting holes of the attachment member enable multiple configurations of the cylindrical cupholder in relation to the adapter base including an aligned configuration and off-set configuration.

5. The cupholder adapter of claim 1, further comprising at least one spacer positioned between the cylindrical cupholder and the adapter base.

6. The cupholder adapter of claim 2, wherein a screw gear is provided to enable the movement of the plurality of legs via rotation.

7. The cupholder adapter of claim 1, wherein the minimum diameter is 2.6 inches and the maximum diameter is 3.8 inches.

* * * * *

Exhibit 2

(12) **United States Patent**
Cook

(10) **Patent No.:** **US 11,660,995 B2**
 (45) **Date of Patent:** **May 30, 2023**

(54) **CUPHOLDER AND ADAPTER FOR LARGE CONTAINERS DURING VEHICLE USE**

(71) Applicant: **Benjamin Cook**, Lincoln, CA (US)

(72) Inventor: **Benjamin Cook**, Lincoln, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **17/592,418**

(22) Filed: **Feb. 3, 2022**

(65) **Prior Publication Data**

US 2022/0250524 A1 Aug. 11, 2022

Related U.S. Application Data

(60) Provisional application No. 63/146,581, filed on Feb. 6, 2021.

(51) **Int. Cl.**

B60N 3/10 (2006.01)

(52) **U.S. Cl.**

CPC **B60N 3/103** (2013.01); **B60N 3/105** (2013.01)

(58) **Field of Classification Search**

CPC B60N 3/103; B60N 3/105

USPC 224/544

See application file for complete search history.

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Primary Examiner — Nathan J Newhouse

Assistant Examiner — Lester L Vanterpool

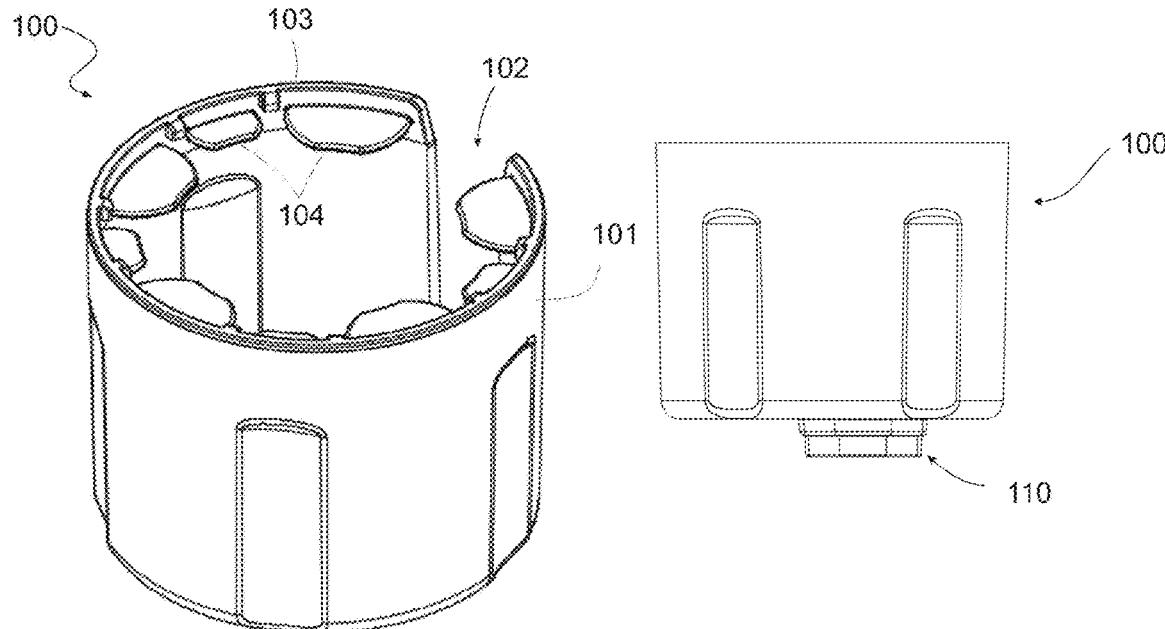
(74) *Attorney, Agent, or Firm* — My Patent Guys;
 Christopher Pilling

(57)

ABSTRACT

A cupholder adapter configured for use with an existing cupholder on a vehicle is provided. The cupholder adapter includes a cylindrical cupholder having a hollow internal volume, a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume, and an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter. The plurality of tabs includes tabs of different lengths and widths which enables and accommodates wide, tall, and narrow beverage containers during vehicle use. The adapter base is configured to install into the recessed cupholder near the console of most vehicles.

7 Claims, 16 Drawing Sheets



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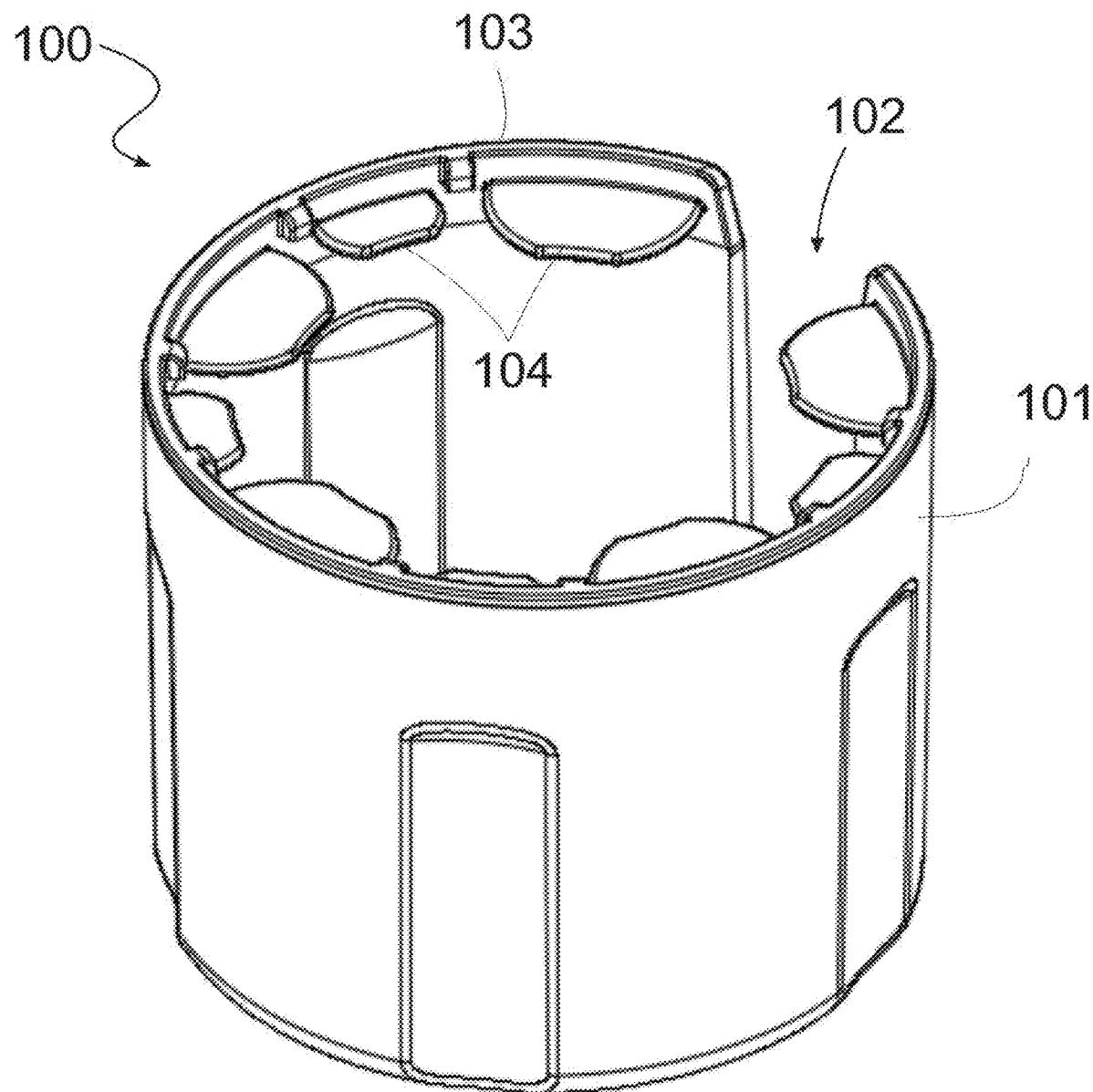


FIG. 1

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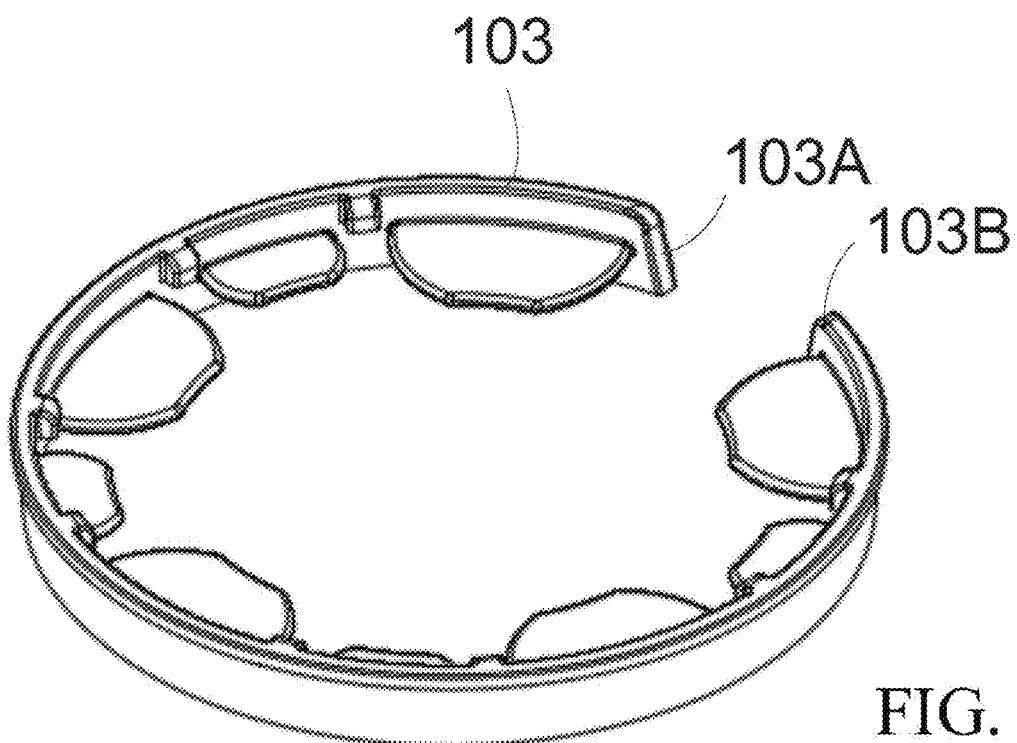


FIG. 2

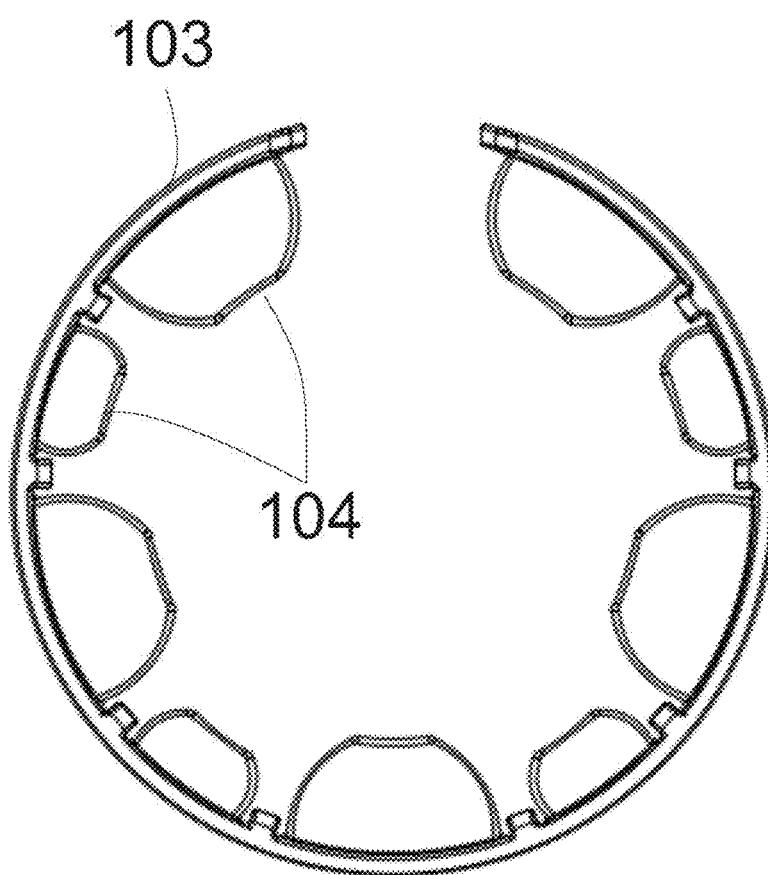


FIG. 3

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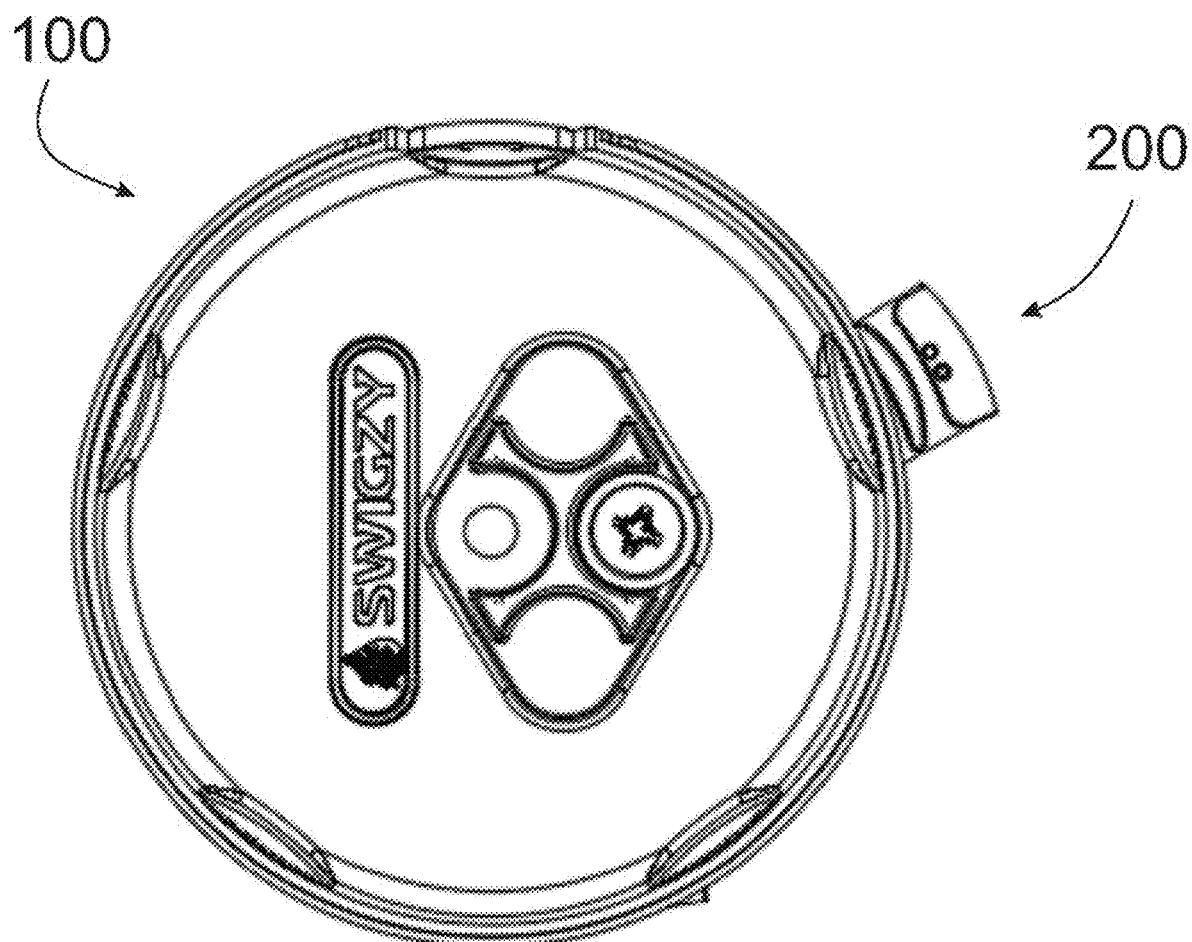


FIG. 4

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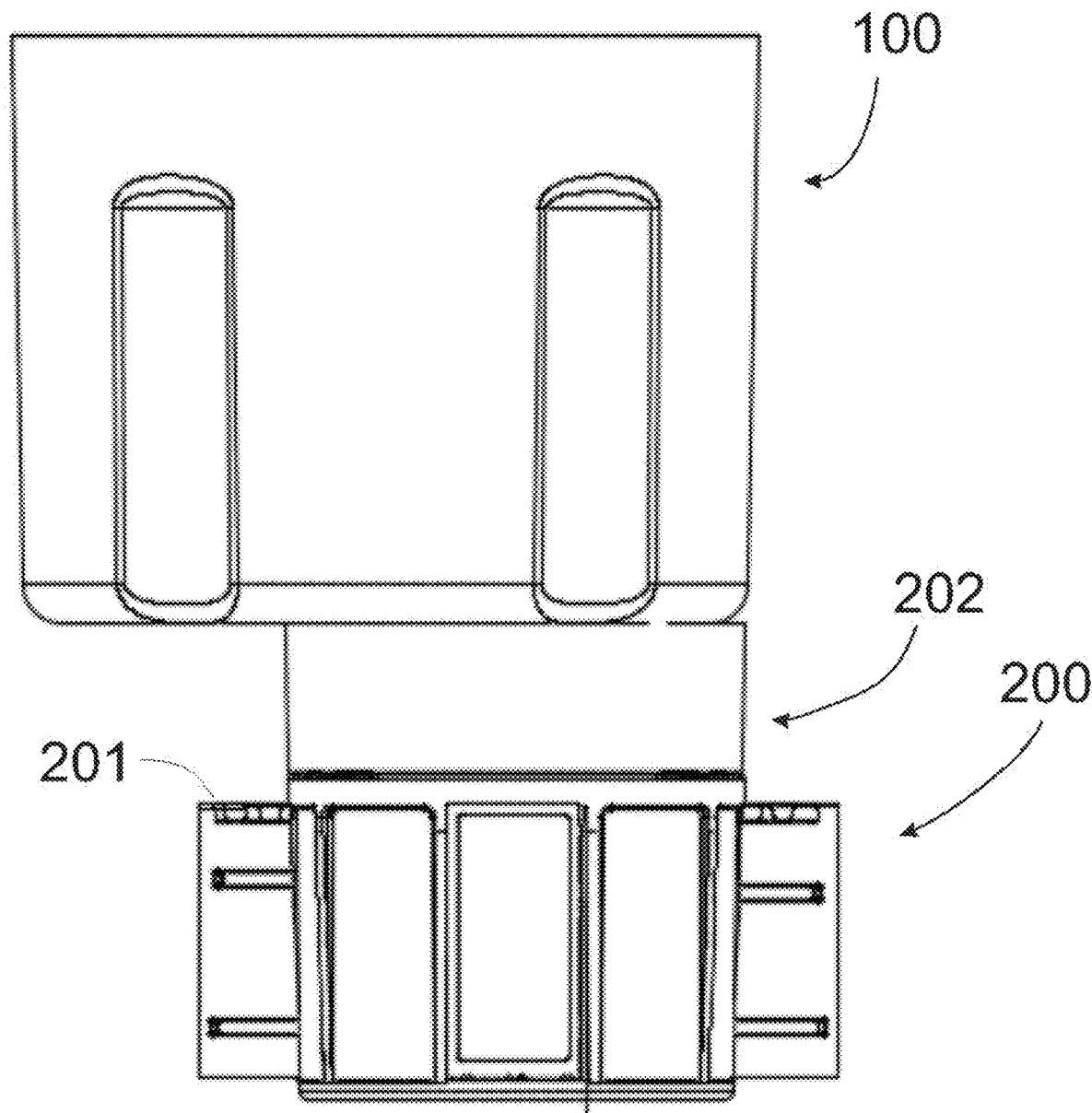


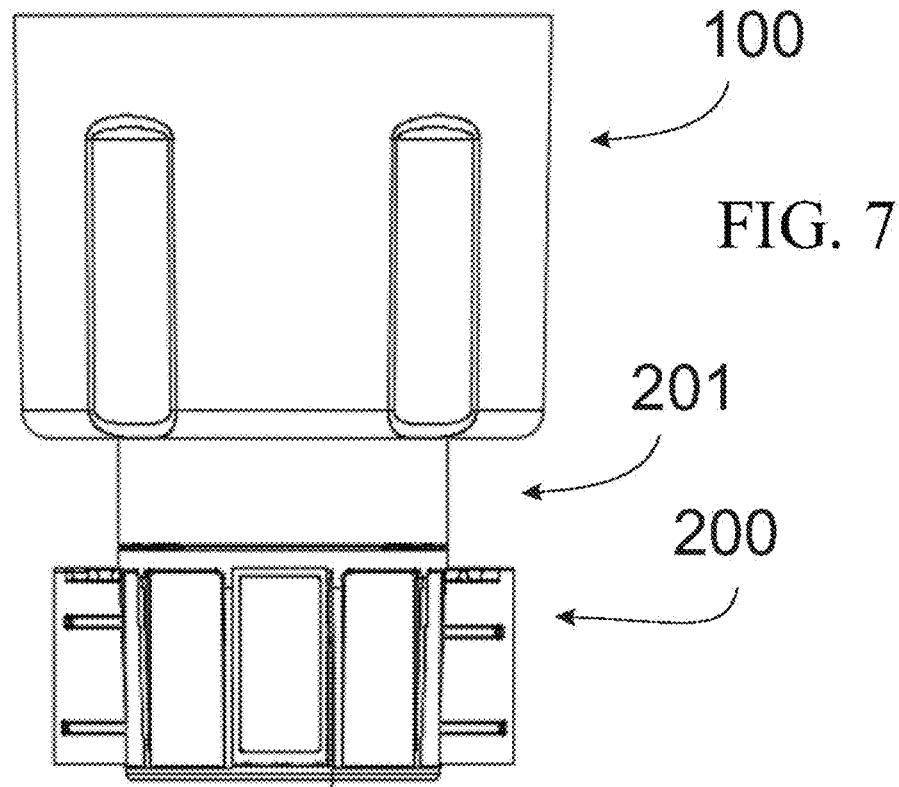
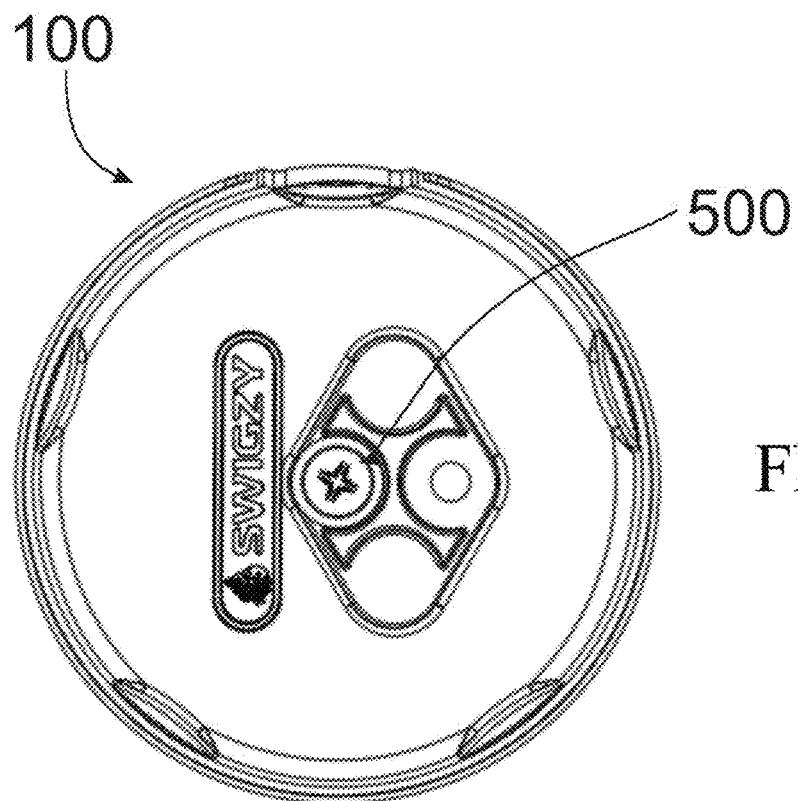
FIG. 5

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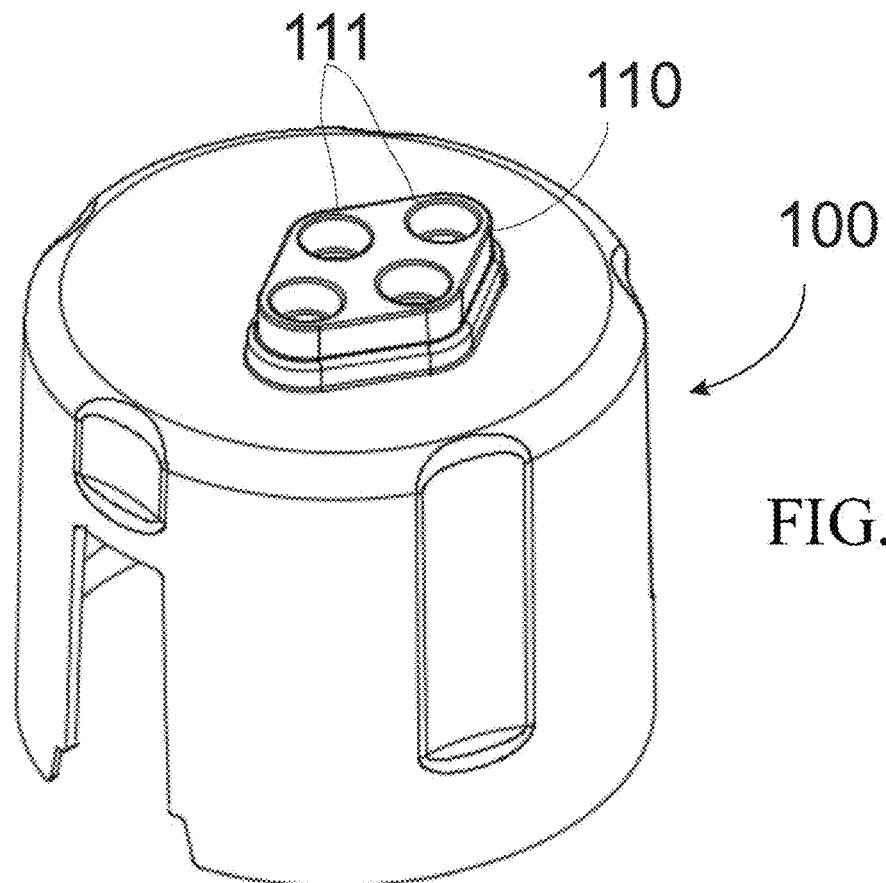


FIG. 8

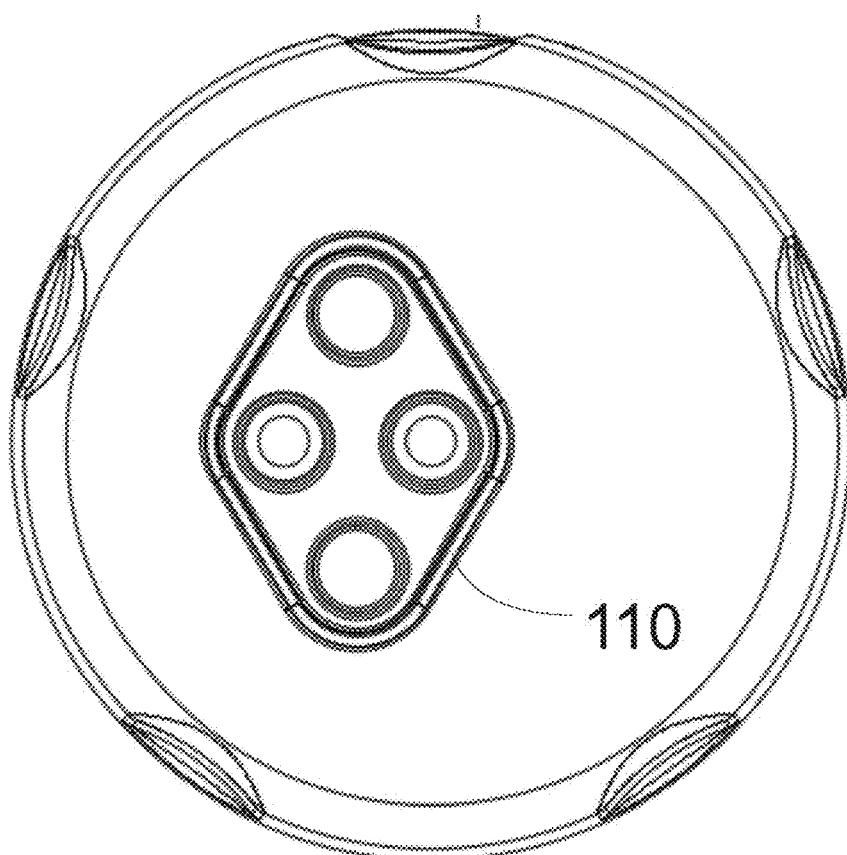


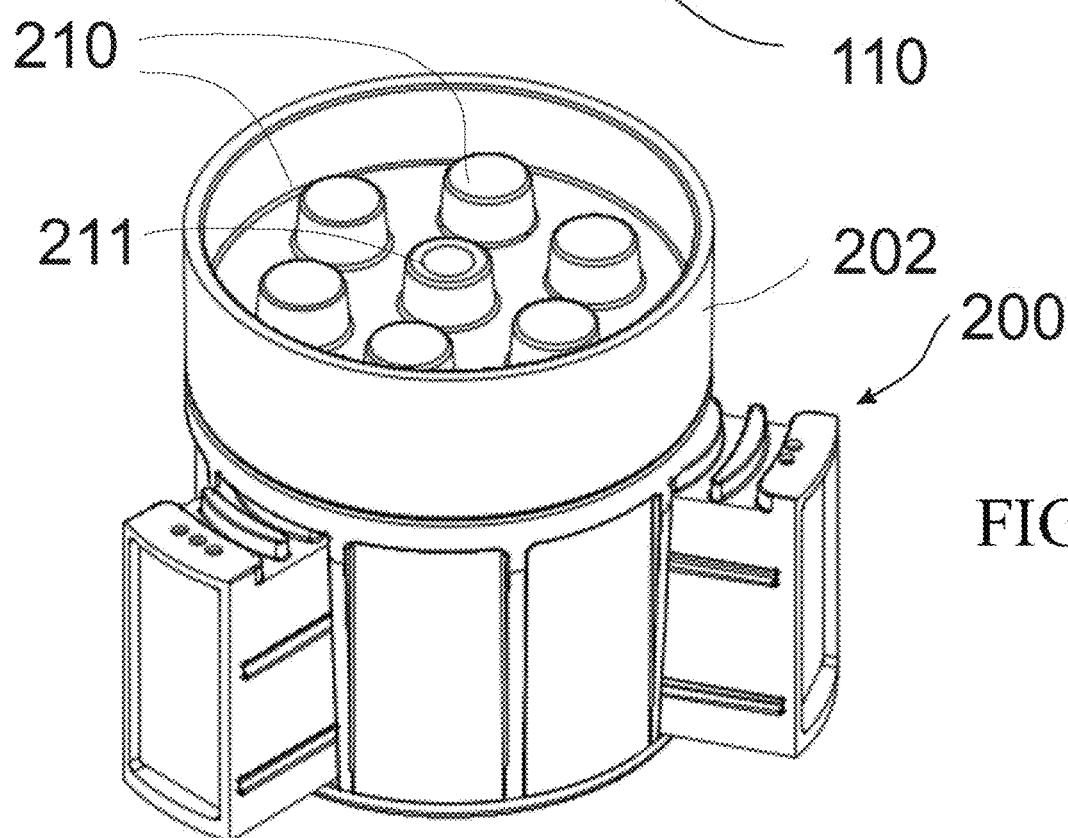
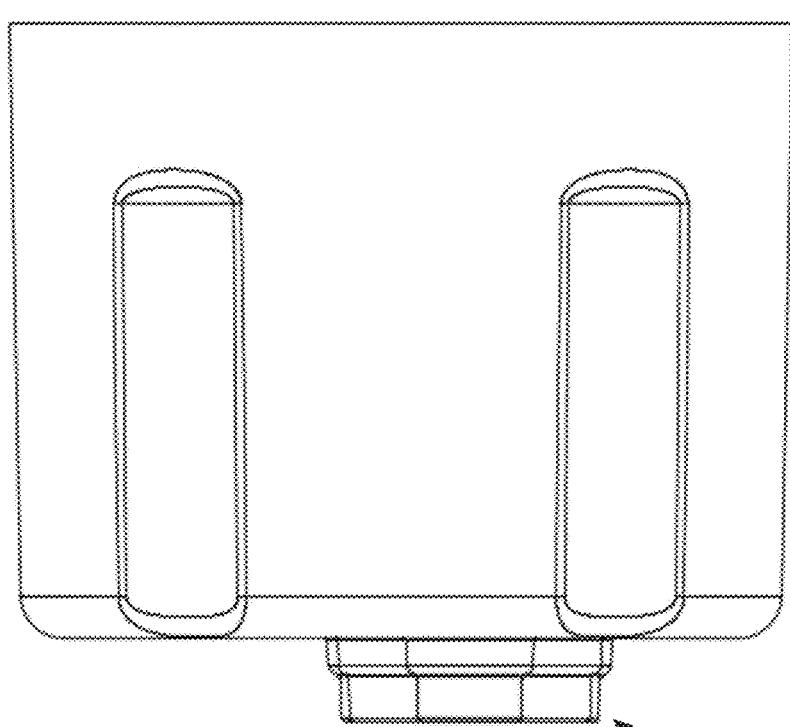
FIG. 9

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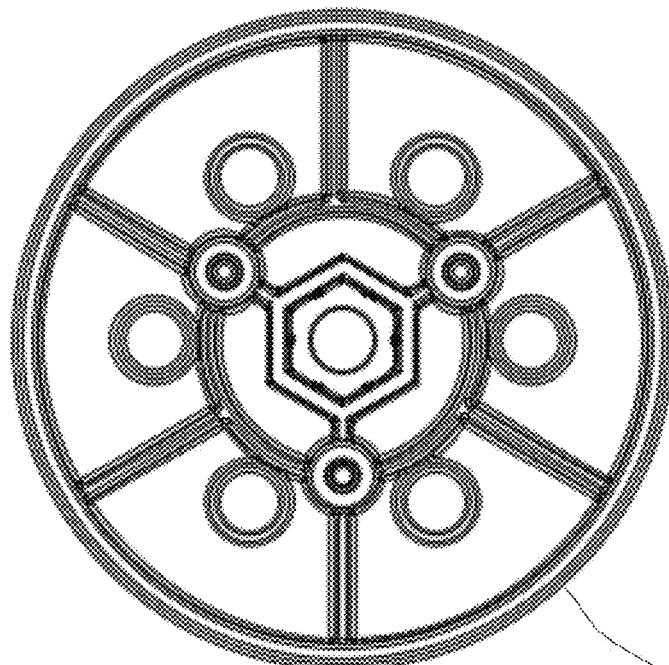


FIG. 12

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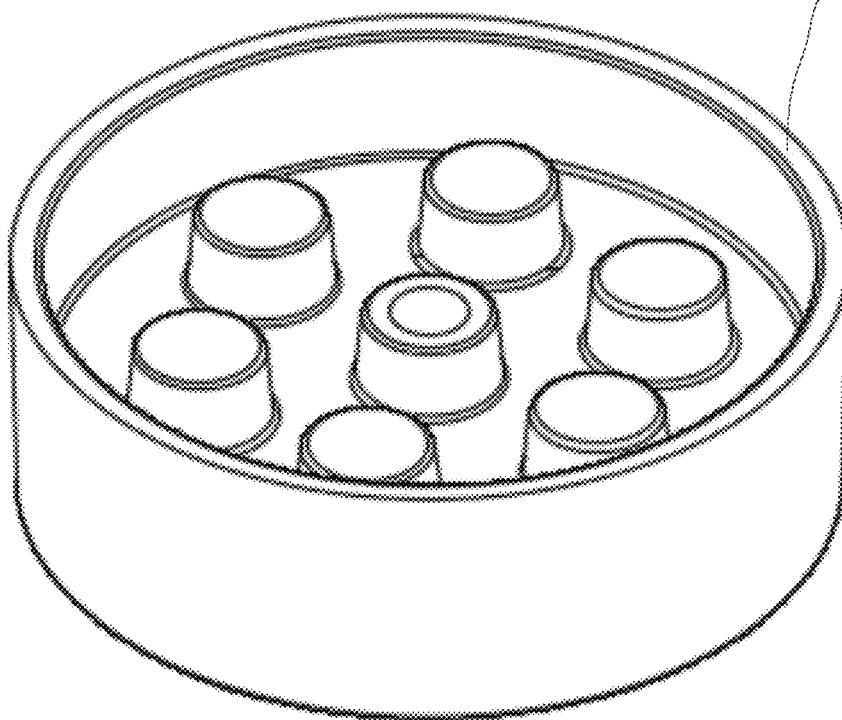


FIG. 13

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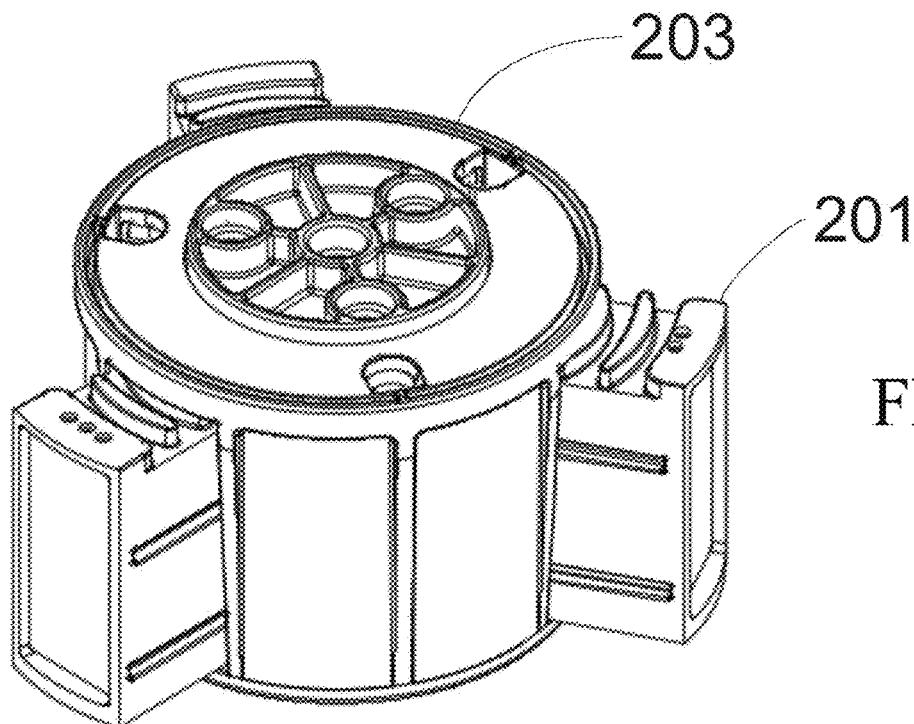


FIG. 14

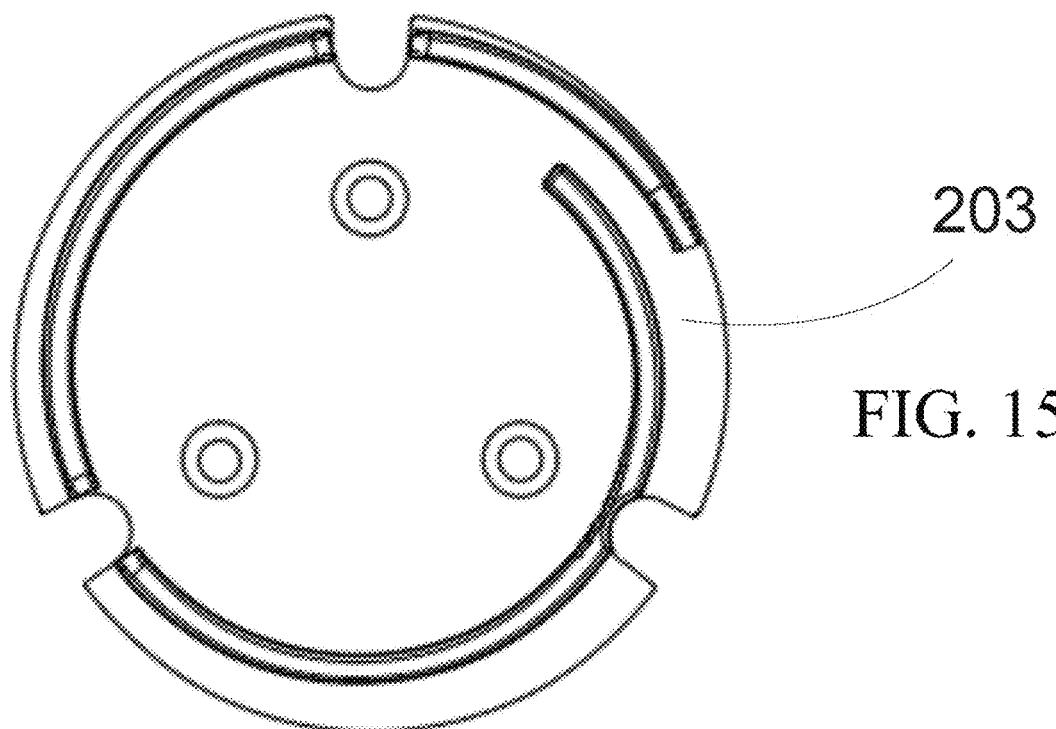


FIG. 15

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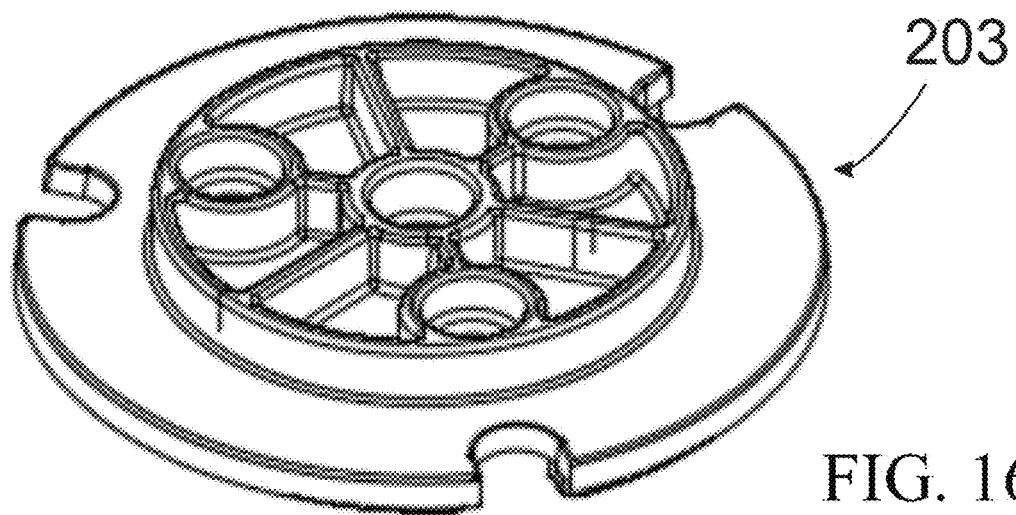


FIG. 16

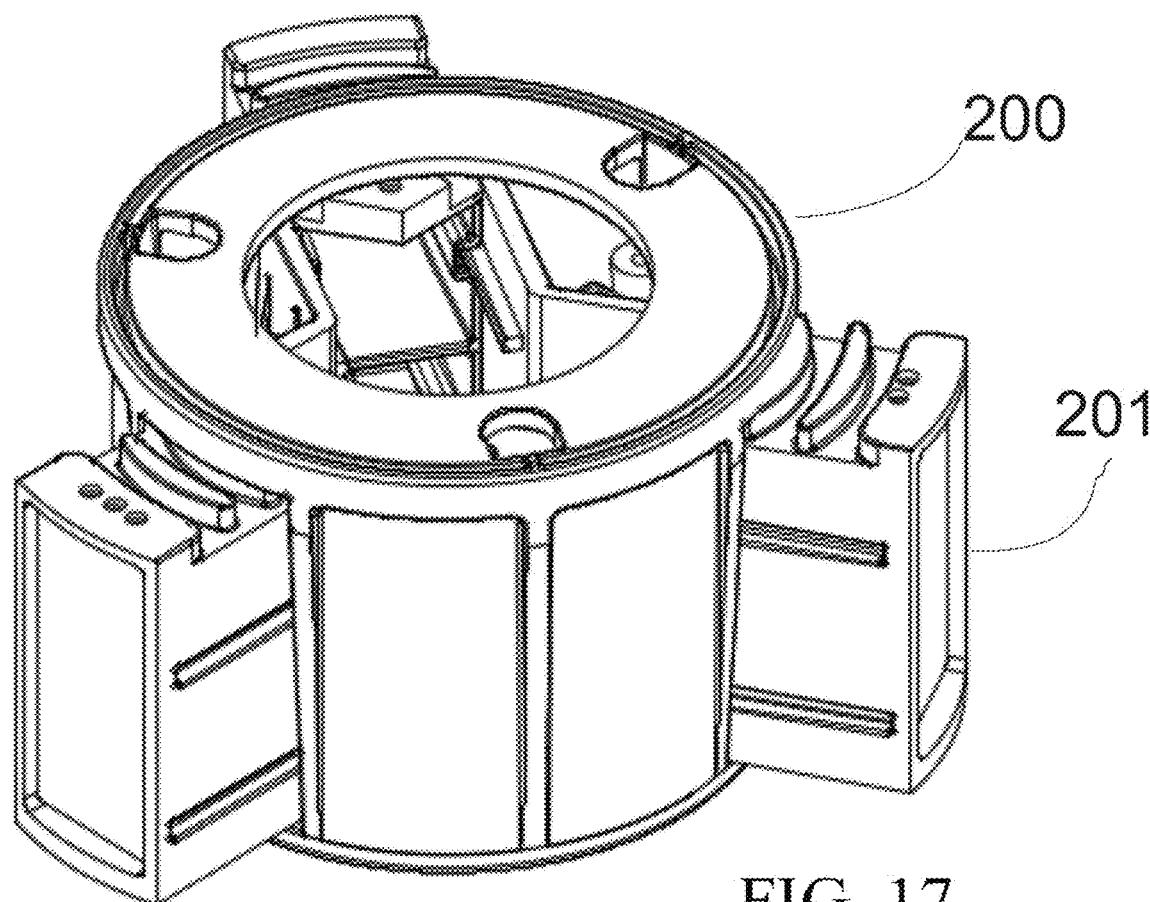


FIG. 17

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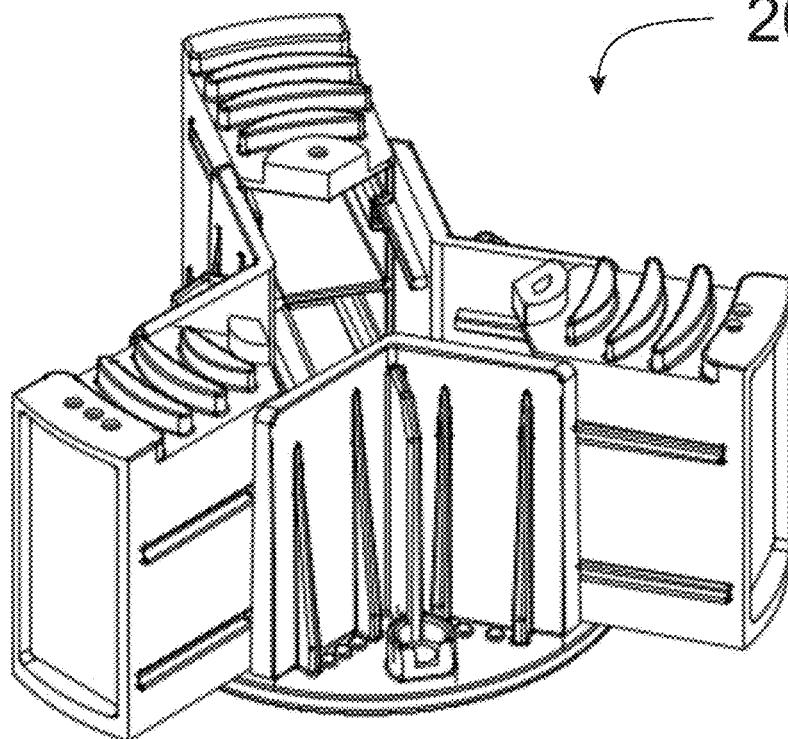


FIG. 18

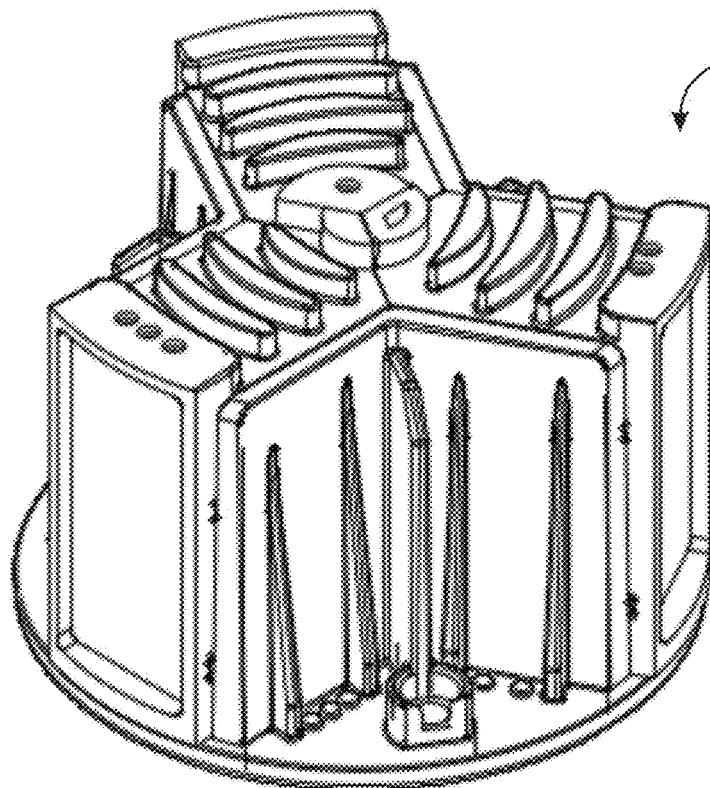


FIG. 19

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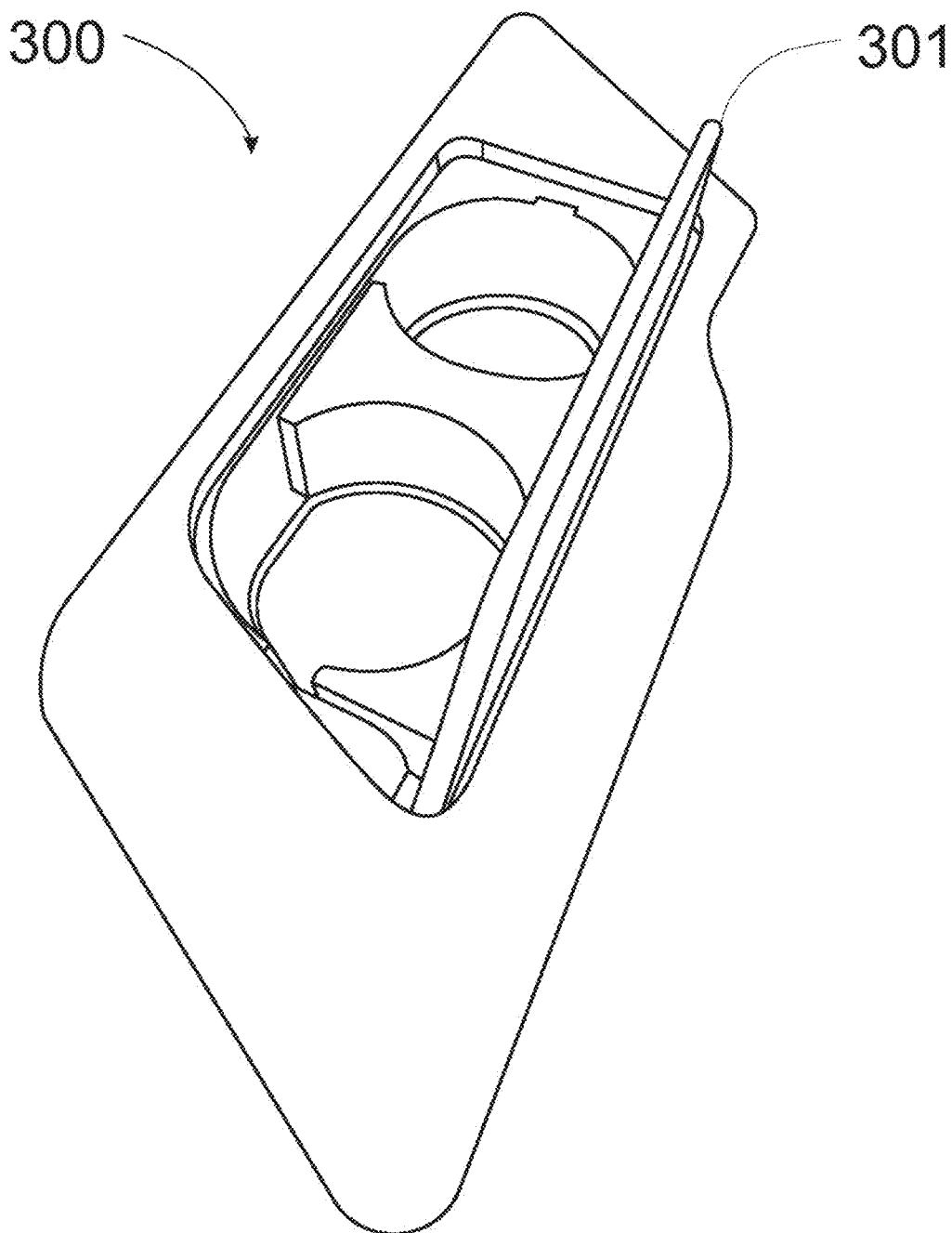


FIG. 20

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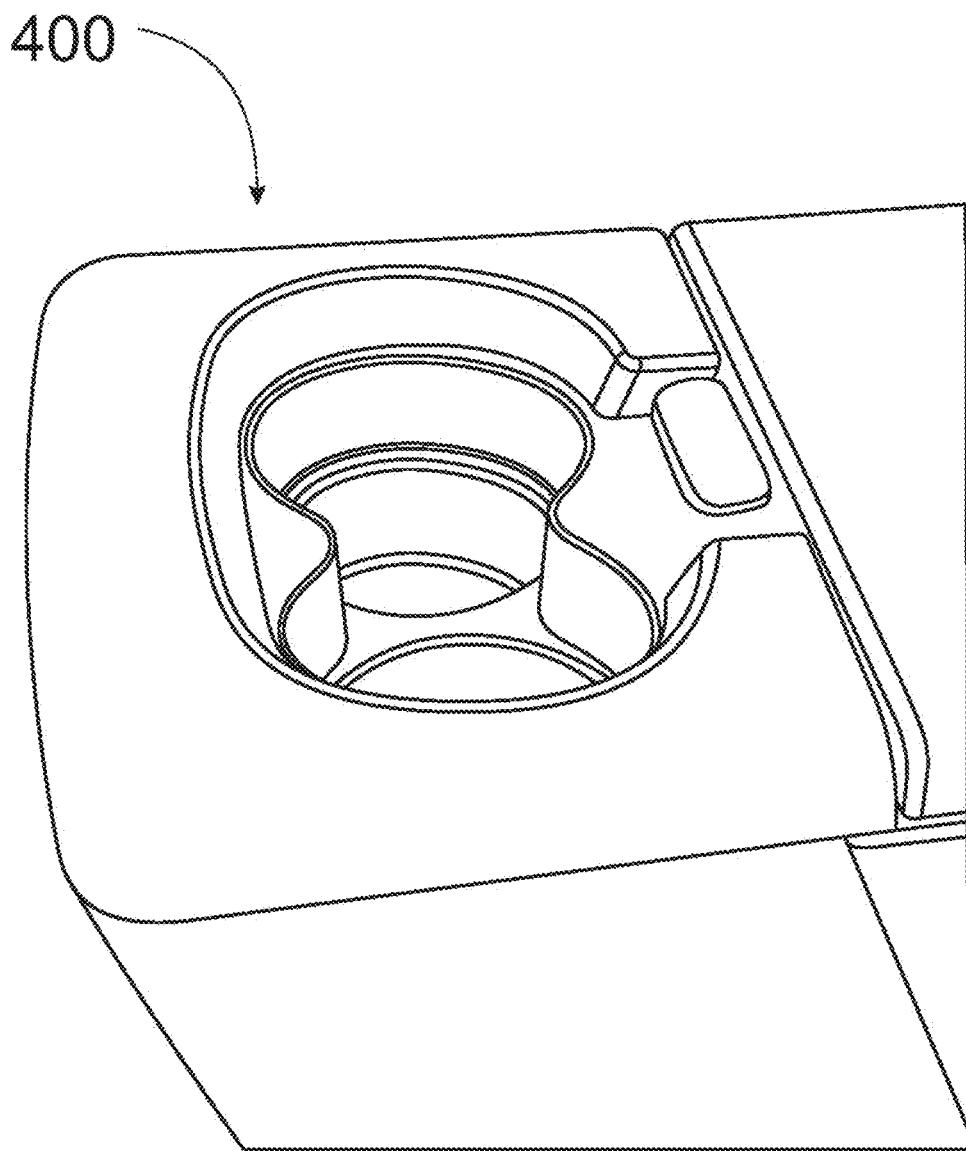


FIG. 21

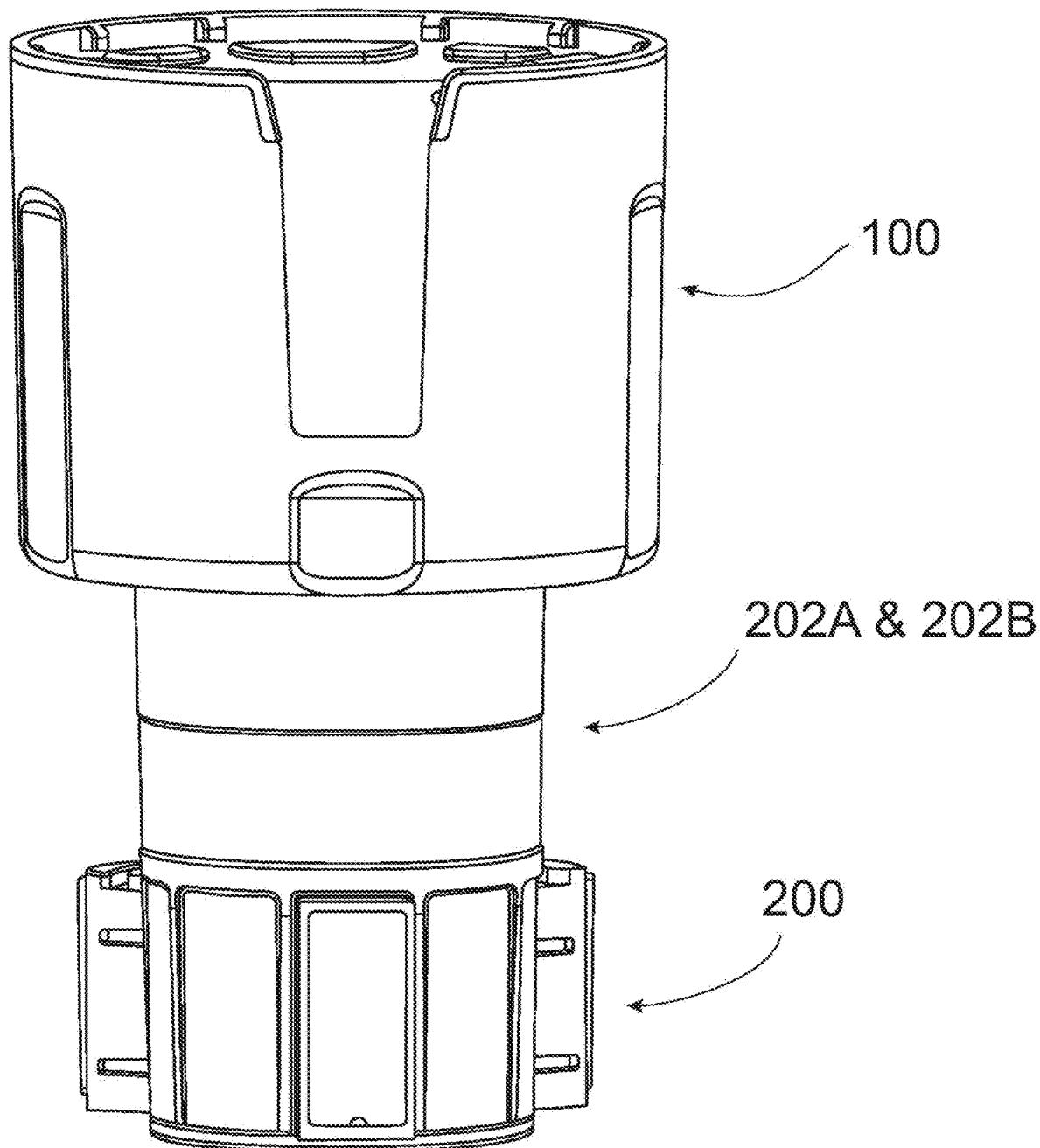


FIG. 22

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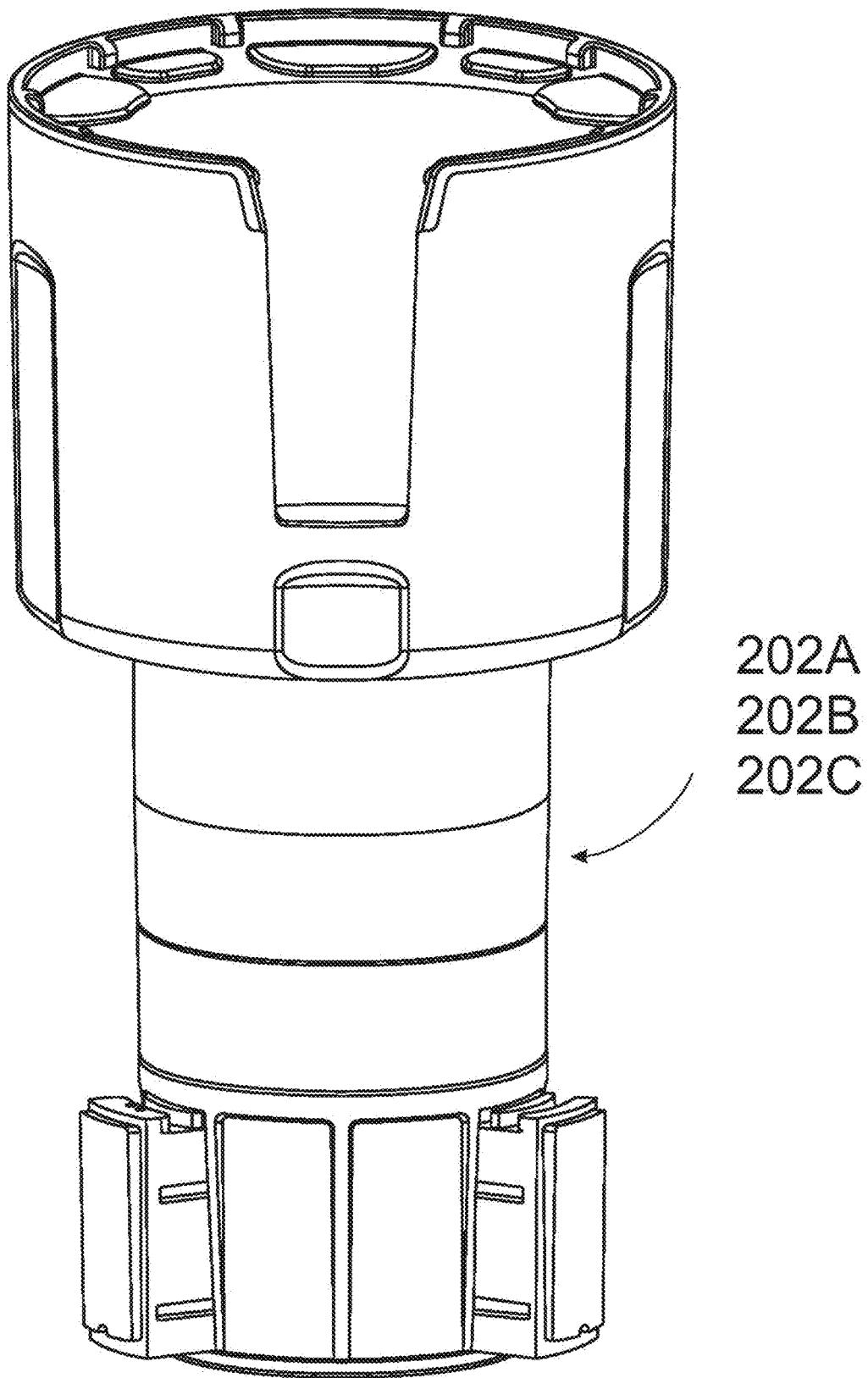


FIG. 23

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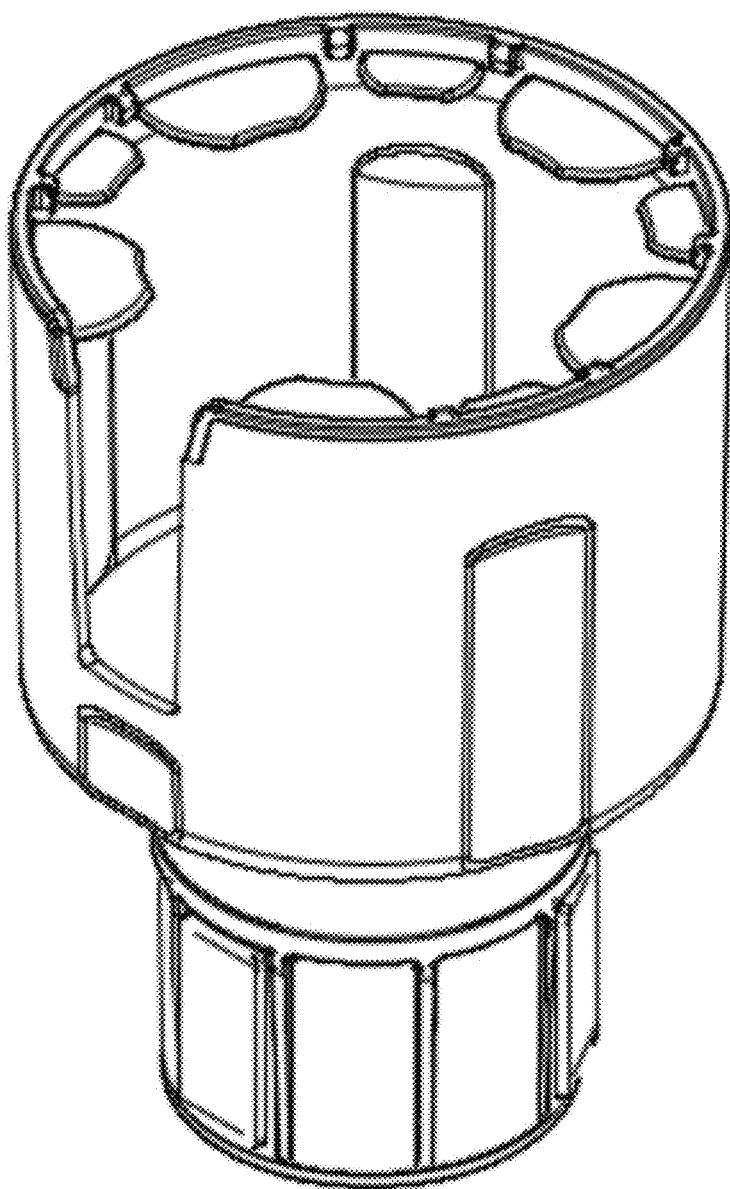


FIG. 24

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CUPHOLDER AND ADAPTER FOR LARGE CONTAINERS DURING VEHICLE USE**CROSS-REFERENCE TO RELATED APPLICATIONS**

The present application claims priority to provisional application 63/146,581, filed on Feb. 6, 2021, the disclosure of which is hereby incorporated in its entirety at least by reference.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to cupholders but more particularly to a cupholder and adapter for large containers during vehicle use.

2. Description of Related Art

Cupholders provided by most motor vehicles are recessed into a center console area or dashboard area of the vehicle. The cupholders are several inches in diameter and fully accommodate narrow and short containers such as disposable cardboard beverage cups and standard carbonated soda cans. Taller or wider containers either cannot fit at all or fit in a manner wherein the container may tip over or rattle about. Such problems may lead to spillage and potential danger to the vehicle and its occupants. Consequently, a cupholder and adapter for large containers during vehicle use is provided.

BRIEF SUMMARY OF THE INVENTION

The following presents a simplified summary of some embodiments of the invention in order to provide a basic understanding of the invention. This summary is not an extensive overview of the invention. It is not intended to identify key/critical elements of the invention or to delineate the scope of the invention. Its sole purpose is to present some embodiments of the invention in a simplified form as a prelude to the more detailed description that is presented later.

In one aspect of the invention, a cupholder adapter configured for use with an existing cupholder on a vehicle is provided, the cupholder adapter comprising a cylindrical cupholder having a hollow internal volume; a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume; an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter.

In one embodiment, the plurality of legs are configured to expand and retract via rotation of the cupholder. In one embodiment, the cylindrical cupholder is configured to be coupled to the adapter base in a variety of configurations including at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis. In another embodiment, an attachment member positioned on a bottom surface of the cylindrical cupholder is provided, wherein the attachment member enables the coupling of the adapter base and the cylindrical cupholder via a mounting spacer attached to the adapter base. In one embodiment, the

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attachment member comprises a number of mounting holes and the mounting spacer comprises a number of protrusions including a central protrusion having a hole, wherein a mounting hole of the number of mounting holes is configured to align with the central protrusion such that a fastener can extend through the mounting hole and the hole of the central protrusion. In another embodiment, the number of mounting holes of the attachment member enables multiple configuration of the cylindrical cupholder in relation to the adapter base including an aligned configuration and off-set configuration. In one embodiment, at least one spacer positioned between the cylindrical cupholder and the adapter base is provided. In one embodiment, a screw gear is provided to enable the movement of the plurality of legs via rotation. In one embodiment, the minimum diameter is approximately 2.6 inches and the maximum diameter is approximately 3.8 inches. In one embodiment, the plurality of tabs comprises tabs of varying length and width.

20 In another aspect of the invention, a cupholder adapter configured for use with an existing cupholder on a vehicle is provided, the cupholder adapter comprising a cylindrical cupholder having a hollow internal volume; an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter.

25 In yet another aspect of the present invention, a cupholder adapter configured for use with an existing cupholder on a vehicle is provided, the cupholder adapter comprising a cylindrical cupholder having a hollow internal volume; an adapter base coupled to the cylindrical cupholder; and, wherein the cylindrical cupholder is configured to be coupled to the adapter in at least two configurations: (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and, (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

30 The foregoing has outlined rather broadly the more pertinent and important features of the present disclosure so that the detailed description of the invention that follows may be better understood and so that the present contribution to the art can be more fully appreciated. Additional features of the invention will be described hereinafter which form the subject of the claims of the invention. It should be appreciated by those skilled in the art that the conception and the disclosed specific methods and structures may be readily utilized as a basis for modifying or designing other structures for carrying out the same purposes of the present disclosure. It should be realized by those skilled in the art that such equivalent structures do not depart from the spirit and scope of the invention as set forth in the appended claims.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

Other features and advantages of the present invention will become apparent when the following detailed description is read in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a cupholder according to an embodiment of the invention.

FIG. 2 is a perspective view of the collar of the cupholder of FIG. 1.

FIG. 3 is a top view of FIG. 2.

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FIG. 4 is a top view of the cupholder mounted off-center from the adapter according to an embodiment of the present invention.

FIG. 5 is a side view of FIG. 4.

FIG. 6 is a top view of the cupholder mounted in the center of the adapter according to an embodiment of the present invention.

FIG. 7 is a side view of FIG. 6.

FIG. 8 is a perspective bottom view of the cupholder showing the attachment member according to an embodiment of the present invention.

FIG. 9 is a bottom view of FIG. 8.

FIG. 10 is a side view of the cupholder showing the attachment member according to an embodiment of the present invention.

FIG. 11 is a perspective view of the adapter with a mounting spacer according to an embodiment of the present invention.

FIG. 12 is a bottom view of the mounting spacer according to an embodiment of the present invention.

FIG. 13 is a perspective view of FIG. 12.

FIG. 14 is a perspective view of the adapter showing the scroll gear according to an embodiment of the present invention.

FIG. 15 is a bottom view of the scroll gear showing the scroll thread according to an embodiment of the present invention.

FIG. 16 is a top view of the scroll gear according to an embodiment of the present invention.

FIG. 17 is a perspective view of the adapter with the legs expanded according to an embodiment of the present invention.

FIG. 18 is a cutaway view of the legs expanded.

FIG. 19 is a cutaway view of the legs retracted.

FIG. 20 is an exemplary of a manufacturer-installed cupholder in a vehicle showing a lid partially blocking the cupholder.

FIG. 21 is an exemplary of a manufacturer-installed deep cupholder in a vehicle.

FIG. 22 is a perspective view of the present invention with two spacers installed according to an embodiment of the present invention.

FIG. 23 is a perspective view of the present invention with three spacers installed according to an embodiment of the present invention.

FIG. 24 is a perspective view of the present invention with one spacer installed according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The following description is provided to enable any person skilled in the art to make and use the invention and sets forth the best modes contemplated by the inventor of carrying out his invention. Various modifications, however, will remain readily apparent to those skilled in the art, since the general principles of the present invention have been defined herein to specifically provide a cupholder and adapter for large containers during vehicle use.

It is to be understood that the terminology used herein is for the purpose of describing particular embodiments only and is not intended to be limiting. The terms "a" or "an," as used herein, are defined as to mean "at least one." The term "plurality," as used herein, is defined as two or more. The term "another," as used herein, is defined as at least a second or more. The terms "including" and/or "having," as used

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herein, are defined as comprising (i.e., open language). The term "coupled," as used herein, is defined as connected, although not necessarily directly, not necessarily mechanically, and not permanent. The term "providing" is defined herein in its broadest sense, e.g., bringing/coming into physical existence, making available, and/or supplying to someone or something, in whole or in multiple parts at once or over a period of time. As used herein, the terms "about," "generally," or "approximately" apply to all numeric values, whether or not explicitly indicated. These terms generally refer to a range of numbers that one of skill in the art would consider near the stated amount by about 0%, 5%, or 10%, including increments therein. In many instances these terms may include numbers that are rounded to the nearest significant figure.

Referring now to accompanying FIGS. 1-3, a cupholder 100 of the present invention is illustrated. In one embodiment, the cupholder 100 comprises a generally cylindrical housing 101 having a gap 102 enabling the use of beverage containers having handles to be used. In one embodiment, the cupholder 100 includes a collar 103 having a plurality of tabs 104, wherein the plurality of tabs 104 are of differing sizes and lengths. The plurality of tabs of differing lengths and widths are attached at the top of the cupholder via the collar and point horizontally inward toward the center area of the cupholder. Advantageously, as the tabs are of varying lengths, they are configured to promote stabilization of beverage containers, such as travel cups, water bottles, juice bottles, and carbonated beverage cans of varying widths. The shorter tabs are configured to stabilize cups and cans that are relatively wide. By contrast, the adjacent tabs that are long and extend further inward stabilize containers that are narrow and that might otherwise tip or rattle about while the vehicle is in motion.

Further, the tabs are sufficiently wide to hold large and wide containers that may be too wide to fit in the standard cupholder provided by many motor vehicles. With its width and the aforementioned tabs of varying lengths along with an adapter base that is configured to fit into the cupholder of most vehicles, the cupholder provided herein can accommodate many wide containers and hold them steady as a vehicle rounds corners and encounters rough surfaces. This will be discussed in greater details below.

In one embodiment, the cupholder 100 is configured to hold containers up to approximately 3.85" in diameter, as well as containers down to approximately 2.8" in diameter. In addition, the cupholder provides better support for tapered bottles.

In one embodiment, the plurality of tabs 104 are constructed from a thin, flexible material, such that they may bend fairly easily when a bottle is inserted. In one embodiment, the tabs are constructed of rubber. Otherwise, it would be difficult to insert or remove the bottle. The majority of rubber tabs/flaps in the prior art protrude in a perpendicular manner and are bent down when a bottle is inserted. However, if the tabs remain unbent, and can stay perpendicular to the side of the container, it provides significantly more support for the container and help prevent tipping even when the host vehicle may be turning or braking hard. Thus, the tabs of the present invention are configured to remain unbent and remain perpendicular to the side of the container during use. In one embodiment, the plurality of tabs include a large tab and a small tab, wherein the large tab is approximately 31 mm wide and 16 mm long (at the longest point where the tab extends toward center area of the cupholder) and the

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small tab is approximately 19 mm wide and 9.5 mm long. In one embodiment, the thickness of the plurality of tabs is approximately 1.75 mm.

Advantageously, with multiple length tabs, the cupholder 100 is configured to be used with almost any size bottle without having to make adjustments. The size of the bottle will determine which tabs stay perpendicular and which tabs bend. In some instances, some bottles may end up slightly off-center and a combination of some of the large tabs and some small tabs will stay perpendicular and provide support.

Referring now to FIGS. 4-5, the cupholder 100 is shown attached to an adapter 200, wherein the attachment is offset. The adapter 200 is configured to act as the base for the cupholder 100. Advantageously, the adapter 200 acts as a base having extendable and retractable leg members 201 enabling the adapter to fit into the existing cupholder of the hosting vehicle (such as the cupholders shown in FIGS. 20 and 21). The adapter 200 may be manipulated to tighten (via extending the leg members 201) within the cupholder of the vehicle and provide stability. This will be discussed in further details below. In one embodiment, a spacer 202 is positioned between the adapter 200 and cupholder 100. The spacer 202 enables the cupholder 100 to be free of an existing cupholder's dimensions. In some embodiments, more than one spacer may be used. This will be discussed in further details below.

As seen in FIG. 20, in some situations, existing cupholders 300 often have an obstruction such as lid 30 that limits the use of some beverage containers from being used. Thus, the cupholder 100 of the present invention may be off-set from the adapter to avoid the obstructions. That is, the cupholder is not symmetrically positioned above the adapter, wherein the axis of the cupholder is not aligned with the axis of the adapter. This functionality permits the adapter 200 to be installed firmly into the vehicle's own cupholder (such as 300) but for the cupholder 100 provided herein to be moved "off to the side" or away from the obstruction or existing component of the vehicle that would otherwise be blocking the cupholder of the present invention. Alternatively, as shown in FIGS. 6 and 7 the cupholder 100 may be installed and aligned symmetrically over the adapter, i.e. not off-set.

Referring now to FIGS. 8-13, various views of the attachment member 110 and spacer 202 are illustrated. The method of attachment between the cupholder 100 and adapter 200 will be described below. In one embodiment, the cupholder 100 includes an attachment member 110 positioned on a bottom surface of the cupholder. In one embodiment, the attachment member 100 includes four mounting holes 111, wherein the holes 111 are configured to align with a number of protrusions 210 provided in spacer 202. The hole/protrusion combination determines how the cupholder 110 sits on the adapter, i.e. centered or off-set. In one embodiment, the attachment member 110 is offset, wherein a mounting hole is positioned in the center of the bottom surface of the cupholder (best seen in FIG. 9). Best seen in FIGS. 11 and 13, in one embodiment, the central protrusion of protrusion 210 includes a hole 211 such that a fastener 500 (FIG. 6) may be used to attach the cupholder to the spacer (and in turn the adapter). When the fastener is used, the other protrusions provide support with their connection to the corresponding mounting holes. In one embodiment, the fastener is a bolt, and a user would need to unscrew the bolt from the bottom of the cupholder 100, lift the cupholder off the spacer 202, and reposition the cupholder such that an "off center" hole on attachment member 110 is positioned over the center protrusion of protrusions 210 of the spacer. This action may enable the large and wide cupholder 100 to

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be securely positioned upright in the vehicle and not be blocked by the vehicle's console lid, emergency brake, gear shift, or other protruding component as shown in the arrangement of FIGS. 4-5. It should be understood, that although four mounting holes and eight corresponding protrusions are illustrated, the number of mounting holes and/or protrusions may vary.

Referring now to FIGS. 14-19, a mechanism of the adapter enabling the legs to expand and retract is illustrated. 10 As previously mentioned, it is a particular advantage of the present invention to provide an adapter 200 which acts a base for the cupholder of the present invention, wherein the adapter is configured to be positioned within an existing cupholder of a vehicle. In one embodiment, the adapter 200 15 comprises retractable and expandable legs 201 configured to press against the inside surface of the vehicle's cupholder. In one embodiment, the legs may be retracted or expanded via turning the coupled cupholder of the present invention. 20 Advantageously, this allows the adapter to fit more snugly within the existing cupholder providing stability. It also allows the adapter to be used in different sized cupholders, 25 wherein ultimately the present invention can accommodate a variety of beverage container sizes with a variety of vehicle cupholder sizes. The configurability allows beverage containers, in particular wide beverage containers, to be accommodated that otherwise would not fit in an existing vehicle cupholder, while providing features to ensure stability of the beverage within the cupholder and the adapter within the existing vehicle cupholder.

In one embodiment, a screw gear 203 is provided on a top portion of the adapter, wherein the top of the legs include gear teeth, such that the spiral-shaped thread engages the gear teeth causing the legs to horizontally expand or contract 30 depending on the direction of the rotation. The adapter and screw gear 203 is attached to the bottom of the spacer, which is attached to the cupholder, such that rotating the cupholder activates the screw gear 203. The fully contracted position 201B is illustrated in FIG. 19, and the fully expanded position 201A is illustrated in FIG. 18. In one embodiment, 35 the legs enable the adapter base to vary in diameter between 2.6" to 3.8".

FIG. 20 shows a manufacturer-installed cupholder 300 in a vehicle showing a lid 301 partially blocking the cupholder. 45 Referring now to FIGS. 5 and 20, as previously mentioned, in this situation the cupholder 100 can be offset from the adapter base 200 such that their axes are not aligned. In this way, the cupholder 100 can avoid the obstruction of the lid 301.

FIG. 21 shows a manufacturer-installed deep cupholder 400 in a vehicle. Referring now to FIGS. 21-24, when faced with a deep cupholder 400, more spacers can be used to extend the distance between the adapter base 200 and cupholder 100. FIG. 22 shows two spacers 202A and 202B 55 installed. Likewise, FIG. 23 shows three spacers 202A, 202B, and 202C used. In one embodiment, the spacers are attached to the adjacent spacer via mechanical hardware, such as a screw or bolt. In some embodiments, one screw or bolt may be used to join the multiple spacers. The number of spacers can be selected depending on the depth of the 60 existing cupholder.

As one skilled in the art can appreciate, the present invention is adaptable for a variety of existing cupholder situations. Only a few exemplary existing cupholders were 65 shown, but it should be understood that the present invention can be modified to accommodate approximately all of the existing cupholders on the market in a vehicle, wherein the

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vehicle includes cars, trucks, buses, golf carts, etc. while providing stability for the beverage.

Although the invention has been described in considerable detail in language specific to structural features, it is to be understood that the invention defined in the appended claims is not necessarily limited to the specific features described. Rather, the specific features are disclosed as exemplary preferred forms of implementing the claimed invention. Stated otherwise, it is to be understood that the phraseology and terminology employed herein, as well as the abstract, are for the purpose of description and should not be regarded as limiting. Therefore, while exemplary illustrative embodiments of the invention have been described, numerous variations and alternative embodiments will occur to those skilled in the art. Such variations and alternate embodiments are contemplated, and can be made without departing from the spirit and scope of the invention. For instance, although a screw gear is used to facilitate the functionality of the expandable and retractable legs, other methods may be used.

It should further be noted that throughout the entire disclosure, the labels such as left, right, front, back, top, bottom, forward, reverse, clockwise, counter clockwise, up, down, or other similar terms such as upper, lower, aft, fore, vertical, horizontal, oblique, proximal, distal, parallel, perpendicular, transverse, longitudinal, etc. have been used for convenience purposes only and are not intended to imply any particular fixed direction or orientation. Instead, they are used to reflect relative locations and/or directions/orientations between various portions of an object.

In addition, reference to "first," "second," "third," and etc. members throughout the disclosure (and in particular, claims) are not used to show a serial or numerical limitation but instead are used to distinguish or identify the various members of the group.

What is claimed is:

1. A cupholder adapter configured for use with an existing cupholder on a vehicle, the cupholder adapter comprising: a cylindrical cupholder having a hollow internal volume; a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume, wherein the plurality of tabs comprises tabs of varying lengths and widths;

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an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter; an attachment member positioned on a bottom surface of the cylindrical cupholder, wherein the attachment member enables the coupling of the adapter base and the cylindrical cupholder via a mounting spacer attached to the adapter base; and, wherein the attachment member comprises a number of mounting holes and the mounting spacer comprises a number of protrusions including a central protrusion having a hole, wherein a mounting hole of the number of mounting holes is configured to align with the central protrusion such that a fastener can extend through the mounting hole and the hole of the central protrusion.

2. The cupholder adapter of claim 1, wherein the plurality of legs are configured to expand and retract via rotation of the cupholder.

3. The cupholder adapter of claim 1, wherein the cylindrical cupholder is configured to be coupled to the adapter base in a variety of configurations including at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

4. The cupholder adapter of claim 1, wherein the number of mounting holes of the attachment member enable multiple configurations of the cylindrical cupholder in relation to the adapter base including an aligned configuration and off-set configuration.

5. The cupholder adapter of claim 1, further comprising at least one spacer positioned between the cylindrical cupholder and the adapter base.

6. The cupholder adapter of claim 2, wherein a screw gear is provided to enable the movement of the plurality of legs via rotation.

7. The cupholder adapter of claim 1, wherein the minimum diameter is 2.6 inches and the maximum diameter is 3.8 inches.

* * * * *

Exhibit 3



APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/592,418	02/03/2022	Benjamin Cook	Cook.001	7623
115322	7590	03/03/2023	EXAMINER	
Christopher Pilling			VANTERPOOL, LESTER L.	
440 Lincoln St				
B			ART UNIT	PAPER NUMBER
HEALDSBURG, CA 95448			3734	
			NOTIFICATION DATE	DELIVERY MODE
			03/03/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chris@cpilling.com
uspto@dockettrak.com

Office Action SummaryExaminer
LESTER L VANTERPOOL

Art Unit

3734

AIA (FITF) Status

Yes

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status1) Responsive to communication(s) filed on February 03, 2022. A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.2a) This action is **FINAL**.2b) This action is non-final.3) An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.4) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.**Disposition of Claims***5) Claim(s) 1-10 is/are pending in the application.

5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) Claim(s) ____ is/are allowed.7) Claim(s) 1-4 and 7-10 is/are rejected.8) Claim(s) 5-6 is/are objected to.9) Claim(s) ____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see

http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers10) The specification is objected to by the Examiner.11) The drawing(s) filed on February 03, 2023 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 11912) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).**Certified copies:**a) All b) Some** c) None of the:1. Certified copies of the priority documents have been received.2. Certified copies of the priority documents have been received in Application No. ____.3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)1) Notice of References Cited (PTO-892)3) Interview Summary (PTO-413)2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)

Paper No(s)/Mail Date ____

Paper No(s)/Mail Date ____

4) Other: ____

DETAILED ACTION

1. This Non-Final Office Action is in response to the above identified patent application filed on February 03, 2022. Claims 1 – 10 are pending and currently being examined.

Notice of Pre-AIA or AIA Status

2. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, ("a fastener" as recited in Claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of 35 U.S.C. 112(b):

(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. The term "approximately" in claim 9 is a relative term which renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 9, lines 1 & 2 recites: "wherein the minimum diameter is approximately 2.6 inches and the maximum diameter is approximately 3.8 inches".

The term "approximately" is a relative term that is unclear what it encompasses and how many inches are actually required in order for the minimum diameter of the base to be considered "approximately 2.6 inches".

In addition, the term "approximately" is a relative term that is unclear what it encompasses and how many inches are actually required in order for the maximum diameter of the base to be considered "approximately 3.8 inches".

Claim Rejections - 35 USC § 103

6. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

7. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries for establishing a background for determining obviousness under 35 U.S.C. 103 are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim(s) 1, 2, 7, 8 & 9 are rejected under 35 U.S.C. 103 as being unpatentable over (U.S. Patent Number 11,254,253) to Fan.

Regarding claim 1, Fan discloses the cylindrical cupholder (2) having the hollow internal volume (i.e. Internal Volume of (2) in Figure 1);

the collar (i.e. Upper Rib Portion of (2) in Figure 1) attached to the top portion of the cylindrical cupholder (2), wherein the collar (i.e. Upper Rib Portion of (2) in Figure 1) includes the plurality of tabs (i.e. Protruding Rectangular Tabs in Figure 1) extending perpendicularly into the hollow internal volume (i.e. Internal Volume of (2) in Figure 1);

an adapter base (1) coupled to the cylindrical cupholder (2), wherein the adapter base (1) includes the plurality of legs (3) configured to expand and retract such that the diameter of the adapter base (1) is configured to expand from the minimum diameter (See Figure 1) to the maximum diameter (See Figure 2).

However, Fan does not explicitly disclose varying lengths and widths.

Fan '253 recites: "Although the present invention has been described with reference to the preferred embodiments thereof, it is apparent to those skill in the art that a variety of modifications and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims."

Therefore, it would have been an obvious matter of design choice to make the plurality of tabs comprises tabs of varying lengths and widths, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPQ 1955).

Regarding claim 2, Fan discloses wherein the plurality of legs (3) are configured to expand (See Figure 2) and retract (See Figure 1) via rotation (i.e. via (21 & 314) in Figures 5, 7A & 7B) of the cupholder (2) (See Column 5, lines 45 – 48) (See Figure 7B).

Regarding claim 7, Fan discloses comprising at least one spacer (19) positioned between the cylindrical cupholder (2) and the adapter base (1) (See Figure 4).

Regarding claim 8, Fan discloses wherein the screw gear (21) is provided to enable the movement of the plurality of legs (3) via rotation (i.e. via (21 & 314) in Figures 5, 7A & 7B) (See Column 5, lines 45 – 48) (See Figure 7B).

Regarding claim 9, Fan discloses the minimum diameter (See Figures 1 & 7A) and the maximum diameter (See Figures 2 & 7B).

However, Fan does not explicitly disclose approximately 2.6 inches and approximately 3.8 inches.

Fan '253 recites: "Although the present invention has been described with reference to the preferred embodiments thereof, it is apparent to those skill in the art that a variety of modifications and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims."

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was effectively filed to make wherein the minimum diameter of approximately 2.6 inches and the maximum diameter approximately 3.8 inches, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

10. Claim(s) 3 is rejected under 35 U.S.C. 103 as being unpatentable over (U.S. Patent Number 11,254,253) to Fan in view of (U.S. Patent Number 5,676,340) to Ruhnau.

Regarding claim 3, Fan discloses wherein the cylindrical cupholder (2) is configured to be coupled to the adapter base (1) in the variety of configurations including at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis (See Figures 1 & 6).

However, Fan does not explicitly disclose (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

Ruhnau teaches wherein the cylindrical cupholder (20) is configured to be coupled to the adapter base (30) in a variety of configurations (See Figures 3 & 4) including at least (a) the cylindrical cupholder's (20) axis is aligned with the adapted base's (30) axis (See Figure 4); and (b) the cylindrical cupholder's (20) axis is not aligned with the adapter base's (30) axis (See Figure 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was effectively filed to make (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis as taught by Ruhnau with the cupholder adapter of Fan in order to allow the cupholder adapter to be used in circumstances where the vehicle receptacle is mounted too closely to the vehicle surface or where a pair of vehicle receptacles having a small separation distance (See Abstract).

11. Claim(s) 3 & 4 are rejected under 35 U.S.C. 103 as being unpatentable over (U.S. Patent Number 11,254,253) to Fan in view of (U.S. Patent Number 5,330,145) to Evans et al.

Regarding claim 3, Fan discloses wherein the cylindrical cupholder (2) is configured to be coupled to the adapter base (1) in the variety of configurations including at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis (See Figures 1 & 6).

However, Fan does not explicitly disclose (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

Evans et al., teaches wherein the cylindrical cupholder (28) is configured to be coupled to the adapter base (46) in a variety of configurations (See Figures 3 & 4) including at least (a) the cylindrical cupholder's (28) axis is aligned with the adapted base's (46) axis (See Figure 3); and (b) the cylindrical cupholder's (28) axis is not aligned with the adapter base's (46) axis (See Figure 4).

It would have been obvious to one having ordinary skill in the art at the time the invention was effectively filed to make (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis as taught by Evans et al., with the cupholder adapter of Fan in order to allow the cupholder to be used in circumstances where the vehicle receptacle is mounted too closely to the vehicle surface or where a pair of vehicle receptacles have a small separation distance.

Regarding claim 4, Fan as modified by Evans et al., discloses the attachment member (48) positioned on the bottom surface of the cylindrical cupholder (28), wherein

the attachment member (28) enables the coupling of the adapter base (46) and the cylindrical cupholder (28) via the mounting spacer (52) attached to the adapter base (46).

Claim Rejections - 35 USC § 102

12. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.

14. Claim(s) 10 is rejected under 35 U.S.C. 102(a)(1) as being anticipated by (U.S. Patent Number 5,676,340) to Ruhnau.

Regarding claim 10, Ruhnau discloses the cylindrical cupholder (20) having the hollow internal volume (i.e. Hollow Internal Volume Area of (20) in Figure 1);

an adapter base (30) coupled to the cylindrical cupholder (20); and, wherein the cylindrical cupholder (20) is configured to be coupled to the adapter base (30) in at least two configurations (See Figures 3 & 4): (a) the cylindrical cupholder's (20) axis is aligned with the adapter base's (30) axis (See Figure 4); and, (b) the cylindrical cupholder's (20) axis is not aligned with the adapter base's (30) axis (See Figure 3).

15. Claim(s) 10 is rejected under 35 U.S.C. 102(a)(1) as being anticipated by (U.S. Patent Number 5,330,145) to Evans et al.

Regarding claim 10, Evans et al., discloses the cylindrical cupholder (28) having the hollow internal volume (i.e. Hollow Internal Volume Area of (28) in Figures 3 & 6); an adapter base (46) coupled to the cylindrical cupholder (28); and, wherein the cylindrical cupholder (28) is configured to be coupled to the adapter base (46) in at least two configurations (See Figures 3 & 4): (a) the cylindrical cupholder's (28) axis is aligned with the adapter base's (46) axis (See Figure 3); and, (b) the cylindrical cupholder's (28) axis is not aligned with the adapter base's (46) axis (See Figure 4).

Allowable Subject Matter

16. Claims 5 & 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LESTER L VANTERPOOL whose telephone number is (571)272-8028. The examiner can normally be reached 8:30-5:00.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Newhouse can be reached on 571-272-4544. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L.L.V/
Examiner, Art Unit 3734

/NATHAN J NEWHOUSE/
Supervisory Patent Examiner, Art Unit 3734

Notice of References CitedExaminer
LESTER L VANTERPOOLArt Unit
3734
Page 1 of 1**U.S. PATENT DOCUMENTS**

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Exhibit 4

(12) **United States Patent**
Fan

(10) **Patent No.:** US 11,254,253 B1
 (45) **Date of Patent:** Feb. 22, 2022

(54) **CARRYING BRACKET FOR CUP HOLDER USED IN VEHICLES**

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(72) Inventor: **Eagle Fan**, Chu-Pei (TW)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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B60N 3/00 (2006.01)

B60N 3/10 (2006.01)

(52) **U.S. Cl.**

CPC **B60N 3/103** (2013.01); **B60N 3/106** (2013.01); **B60N 3/108** (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

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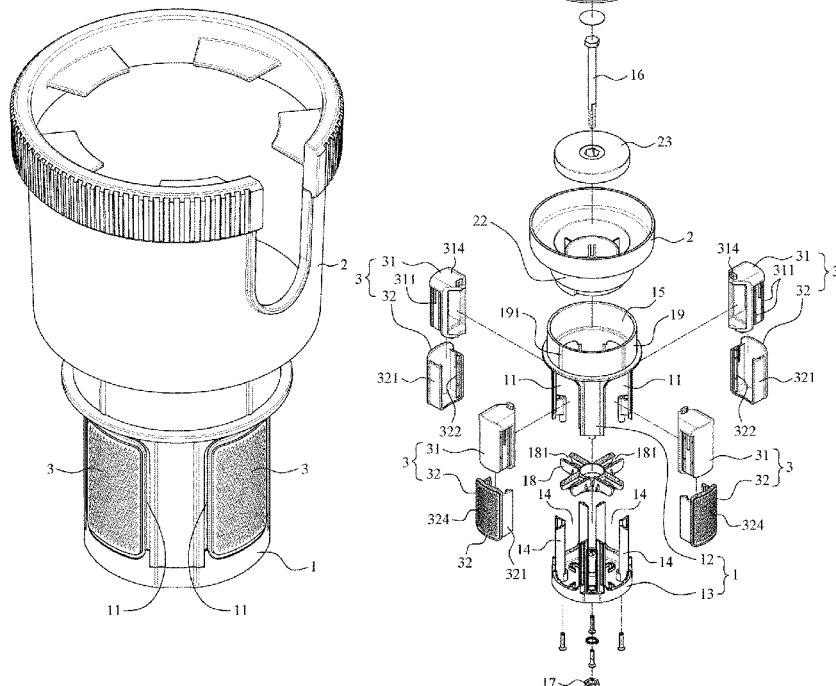
Primary Examiner — Steven M Marsh

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ABSTRACT

A carrying bracket for a cup holder used in vehicles is provided, including: a base unit, a rotating unit, and a plurality of expansion units; the outer wall of the base unit being disposed with a plurality of through holes; the rotating unit being mounted on the base unit and rotatable without detachment, the rotating unit having a spiral guide groove facing the base unit; the expansion units being installed in the base unit through the through holes at corresponding positions, and the expansion unit comprising a moving part and a wall support; the wall support for installing the moving part with adjustable position to change the length of the expansion unit; each moving part having a guide block and the plurality of guide blocks all located in the spiral guide groove. When the rotating unit rotates, each moving part moves linearly and protruding outward through the through hole.

10 Claims, 14 Drawing Sheets



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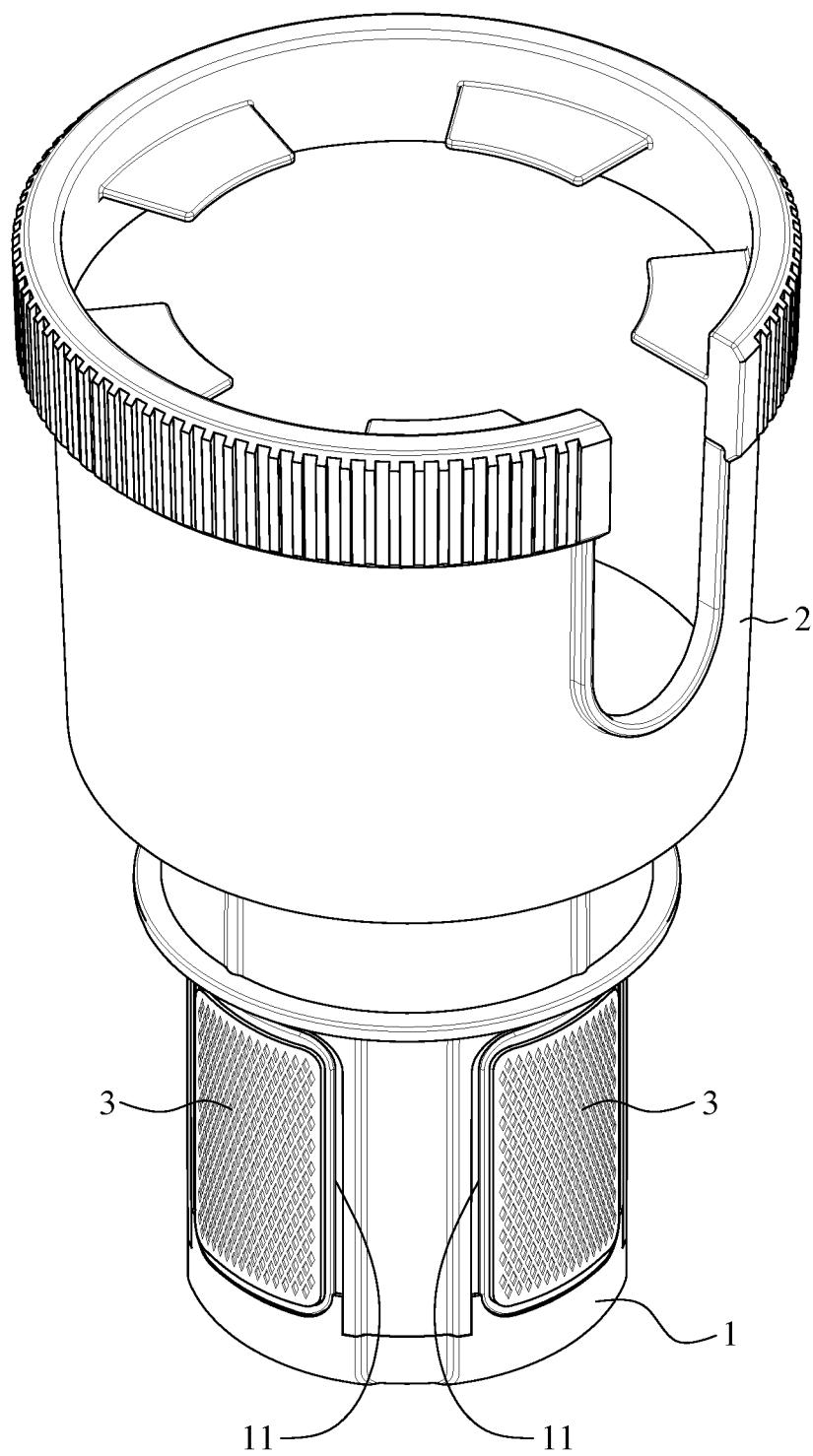


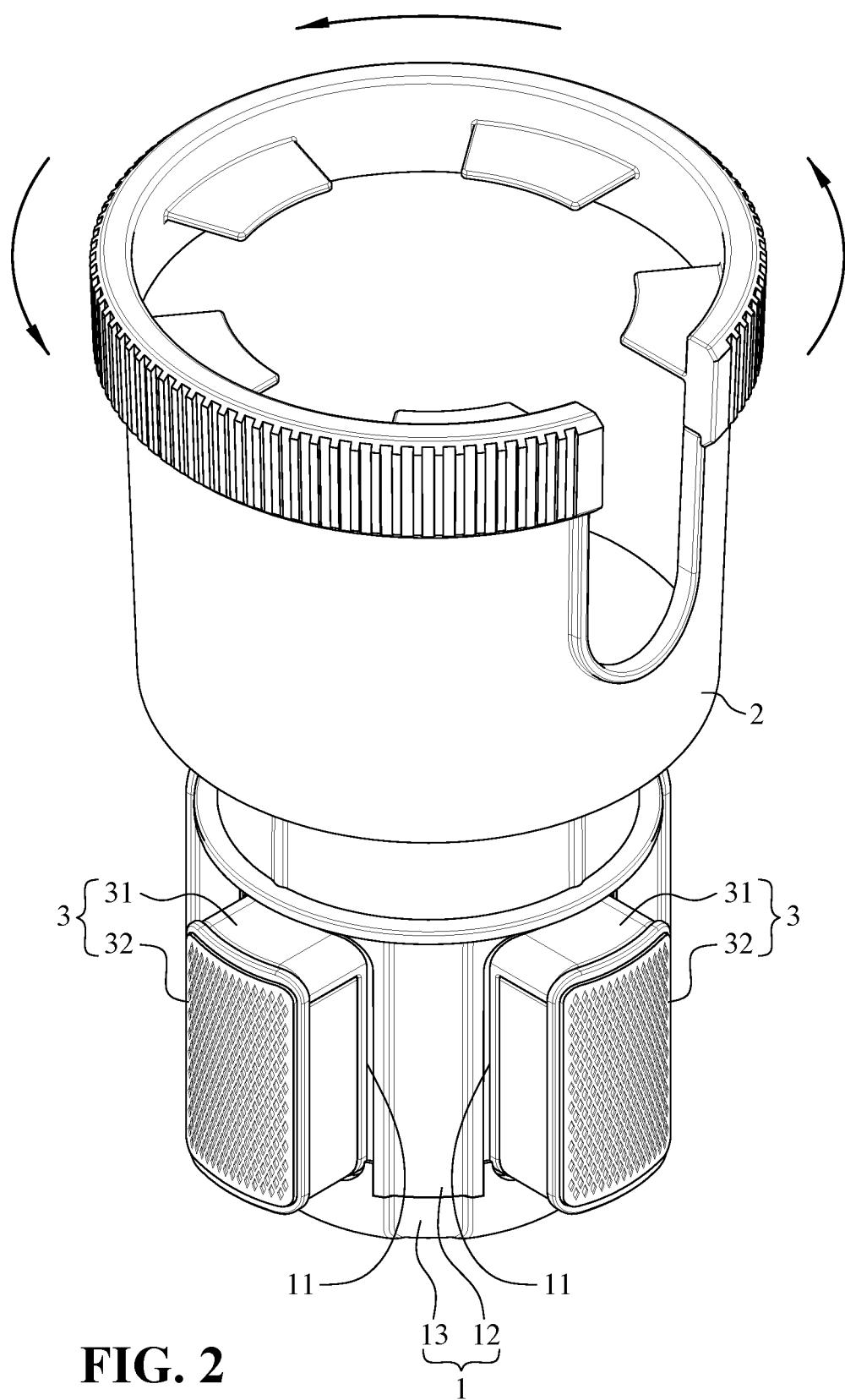
FIG. 1

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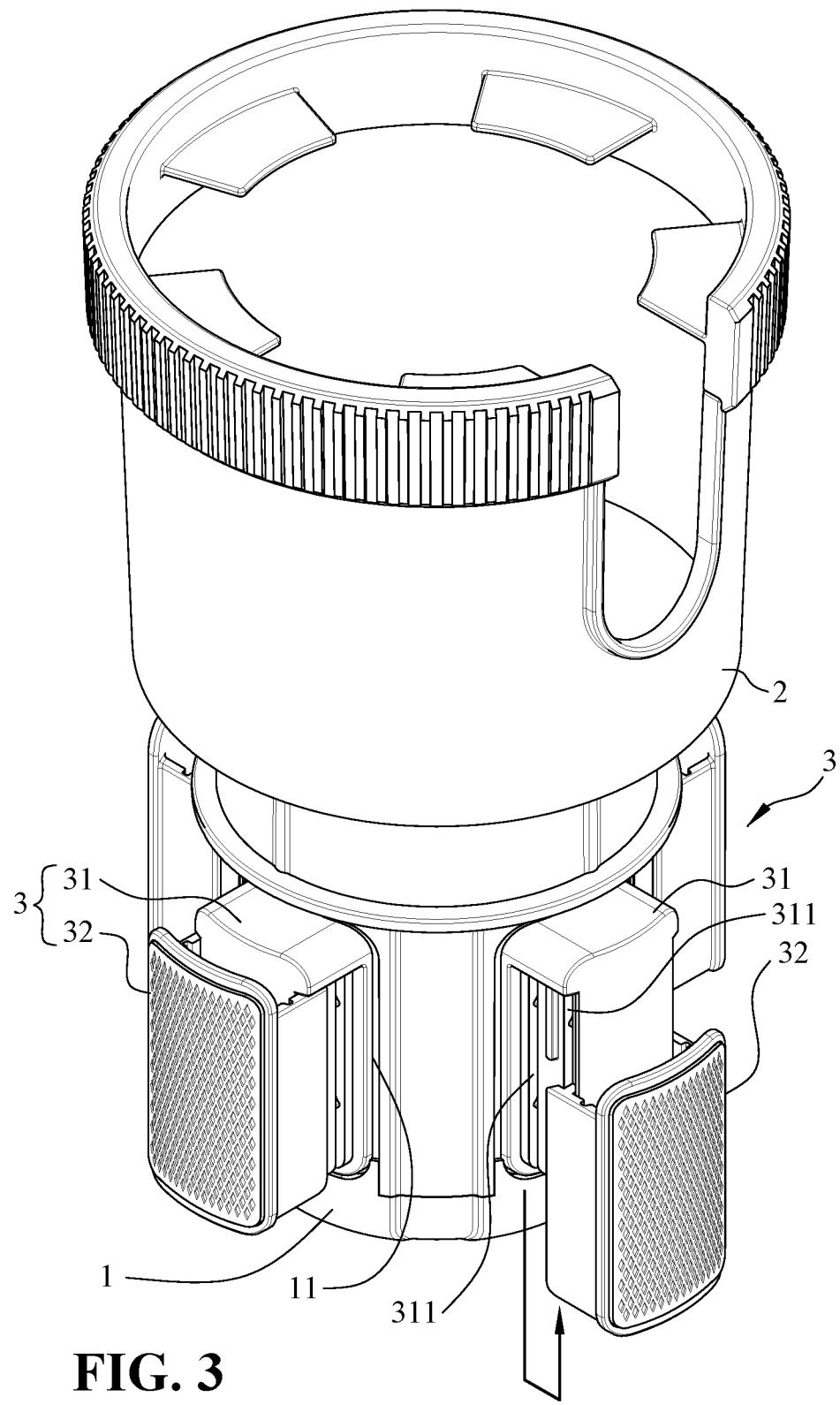


FIG. 3

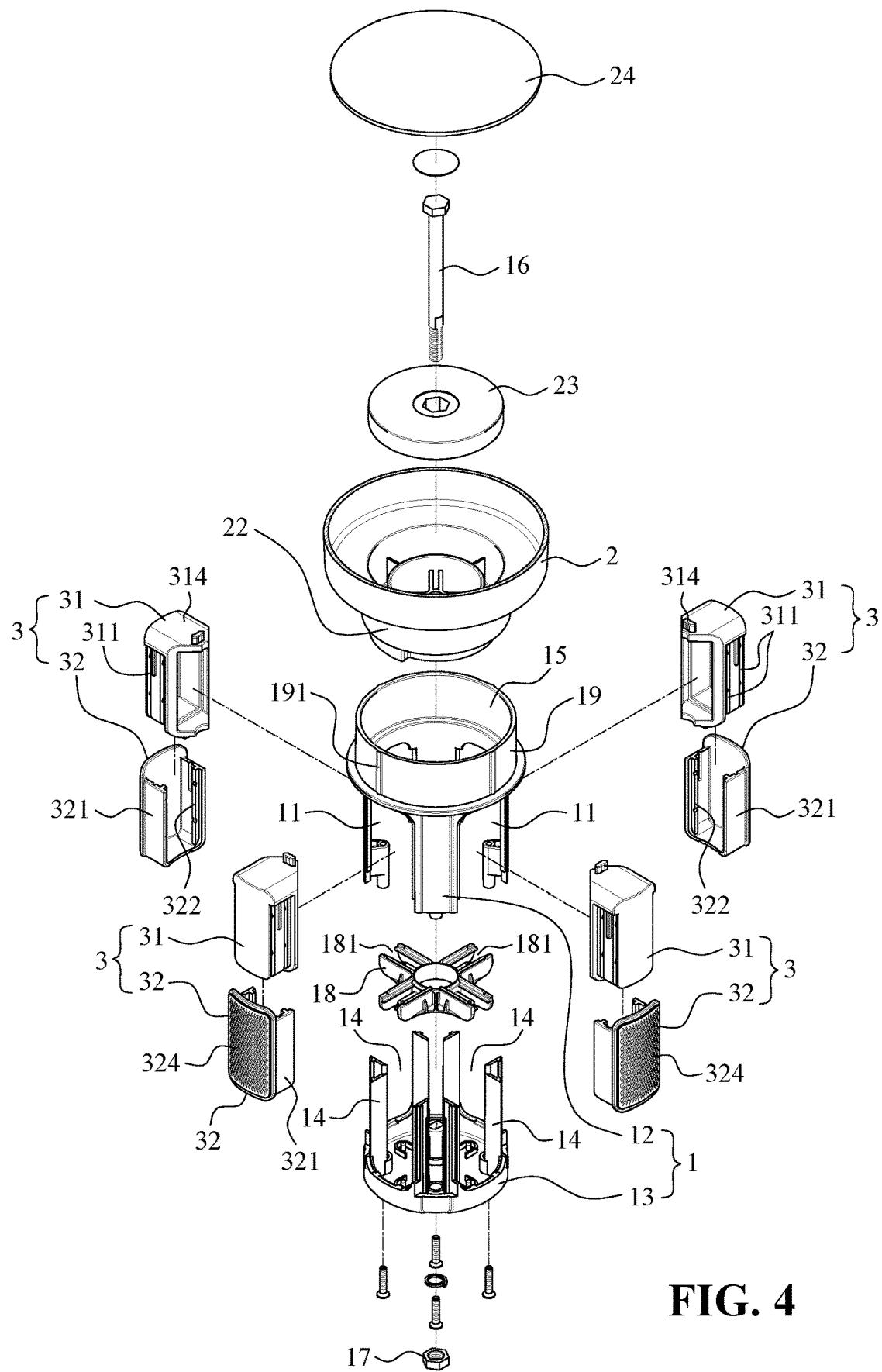
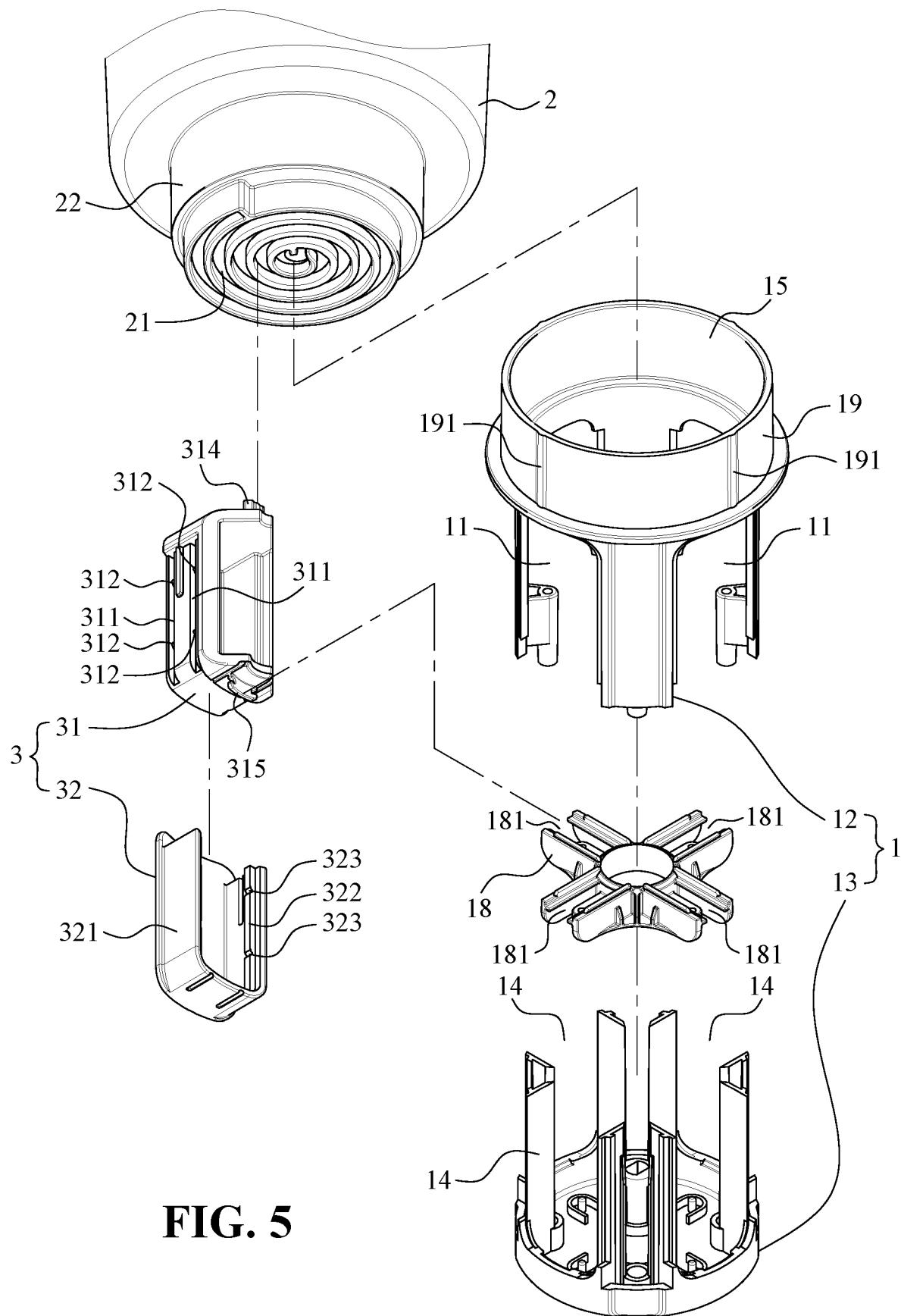


FIG. 4

**FIG. 5**

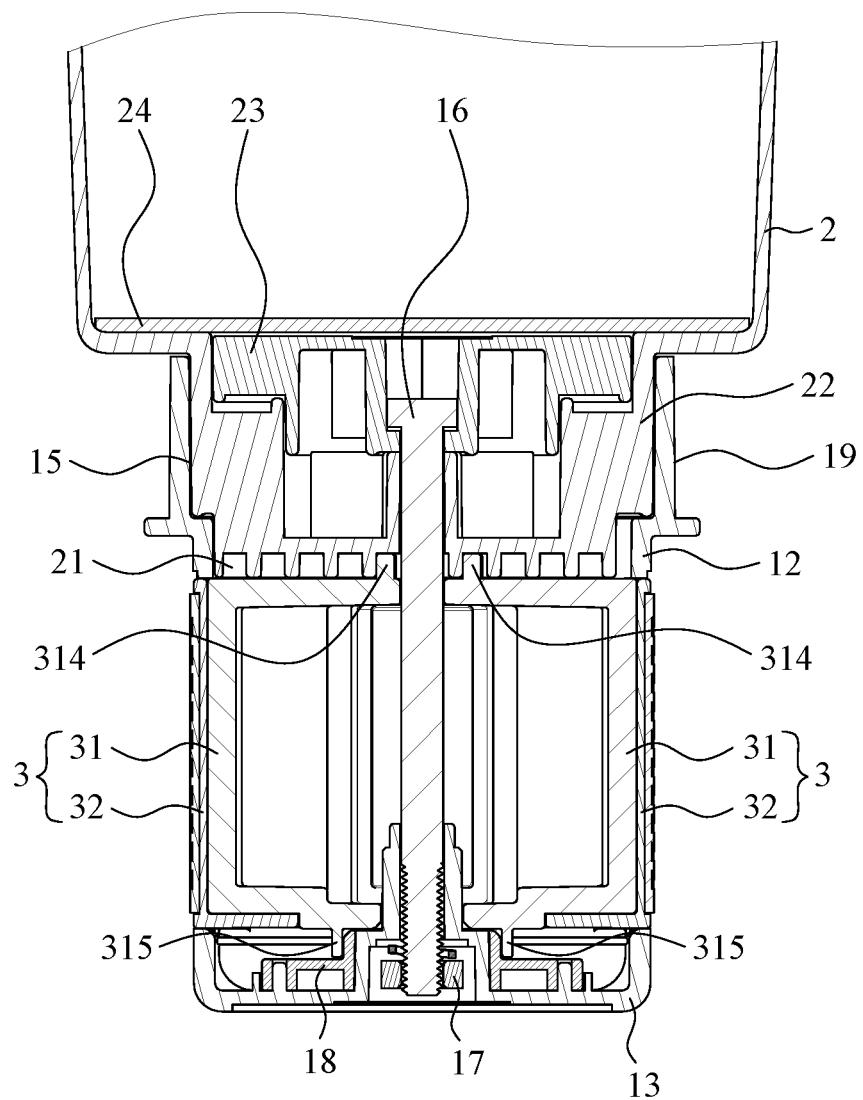
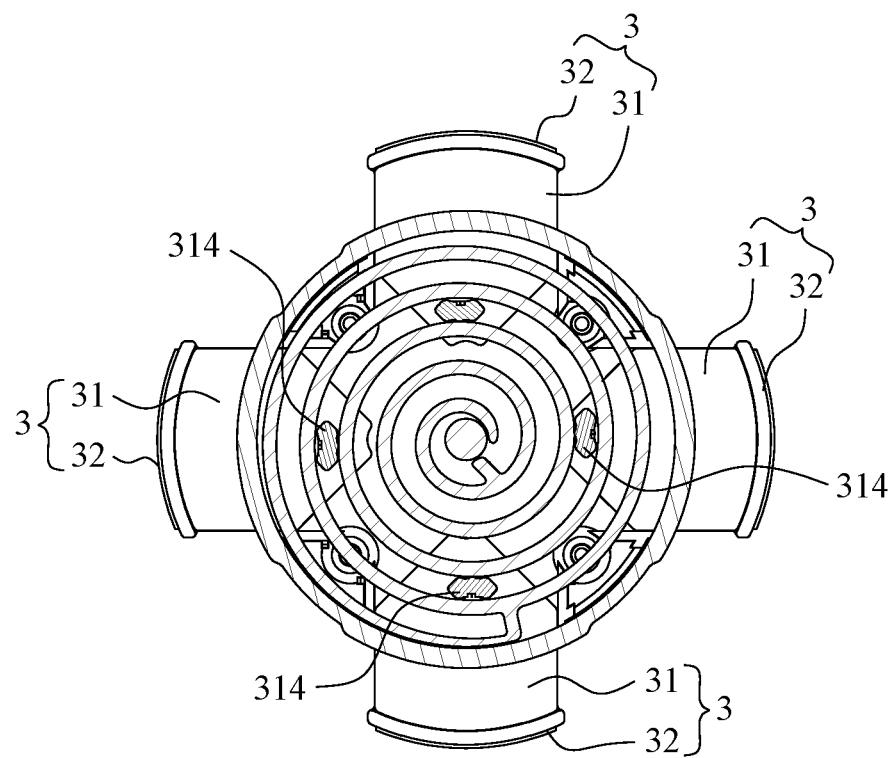
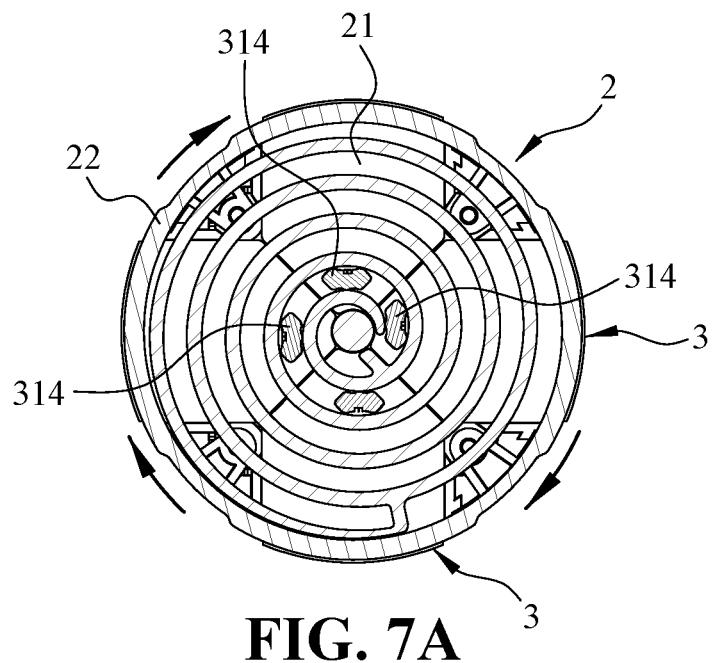


FIG. 6



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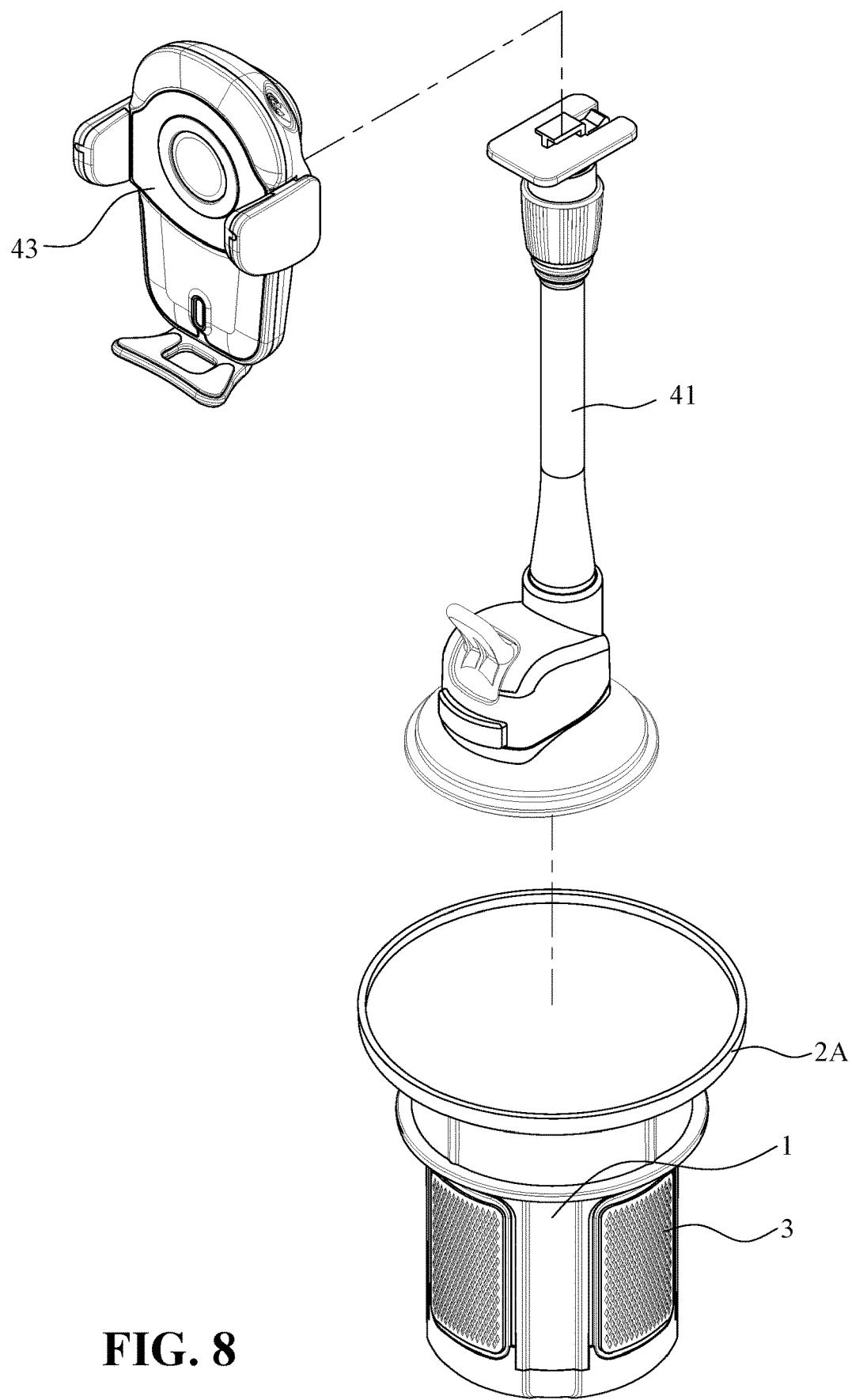


FIG. 8

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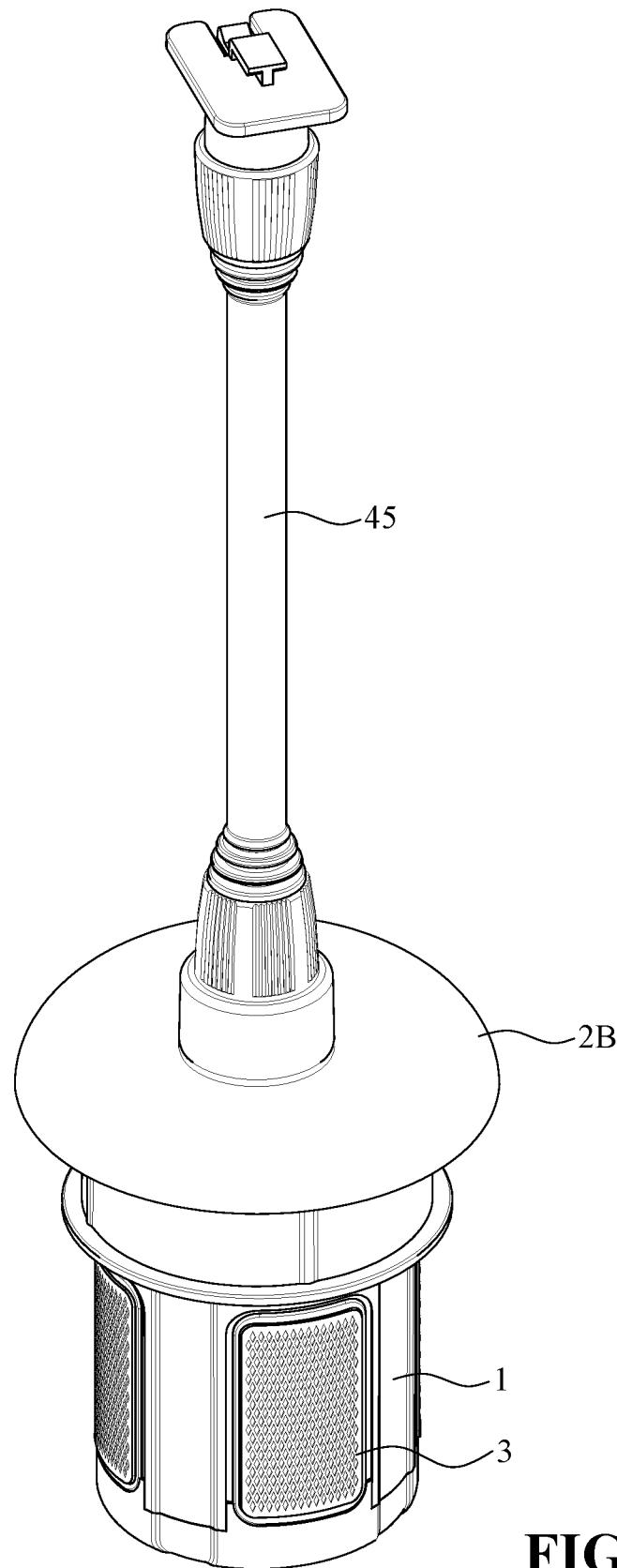


FIG. 9

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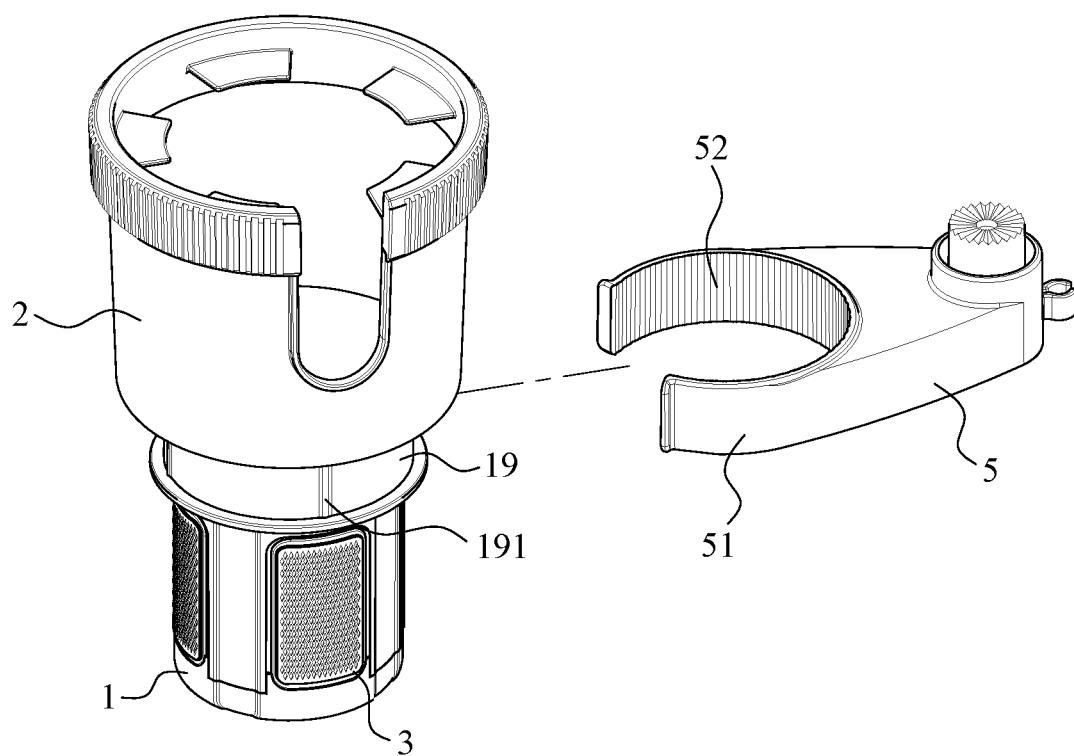


FIG. 10

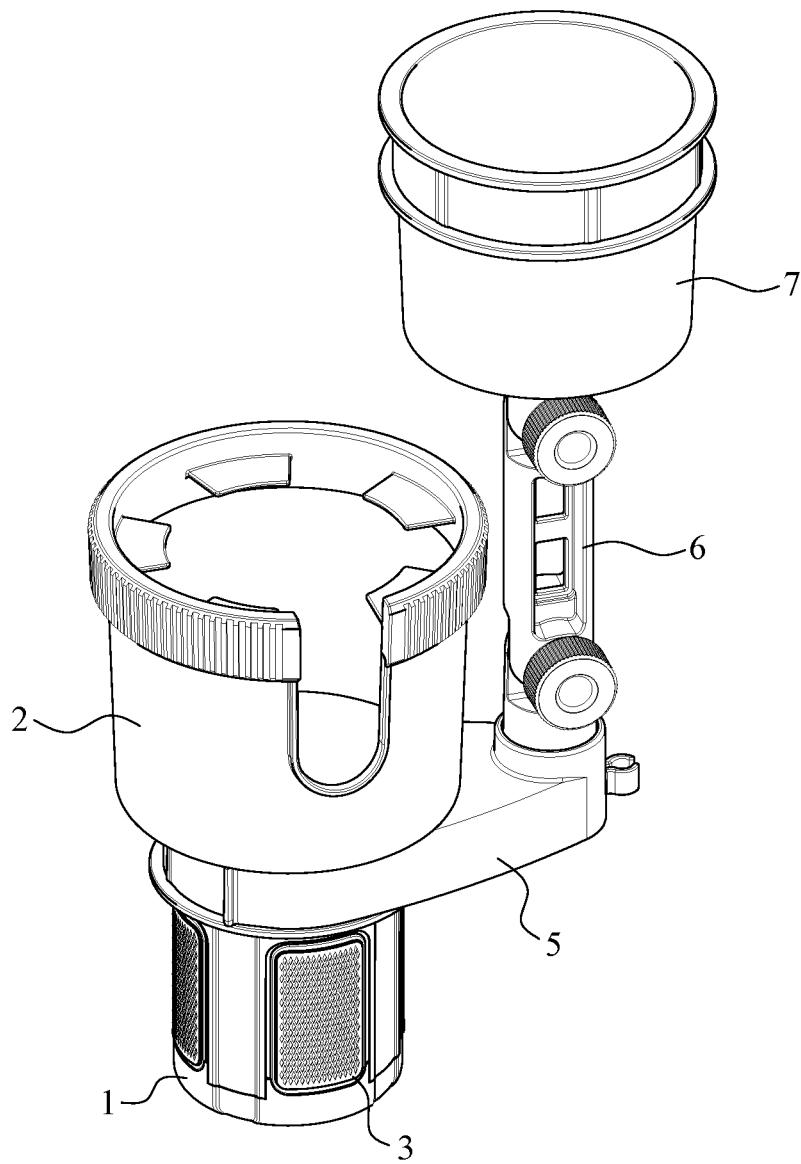


FIG. 11

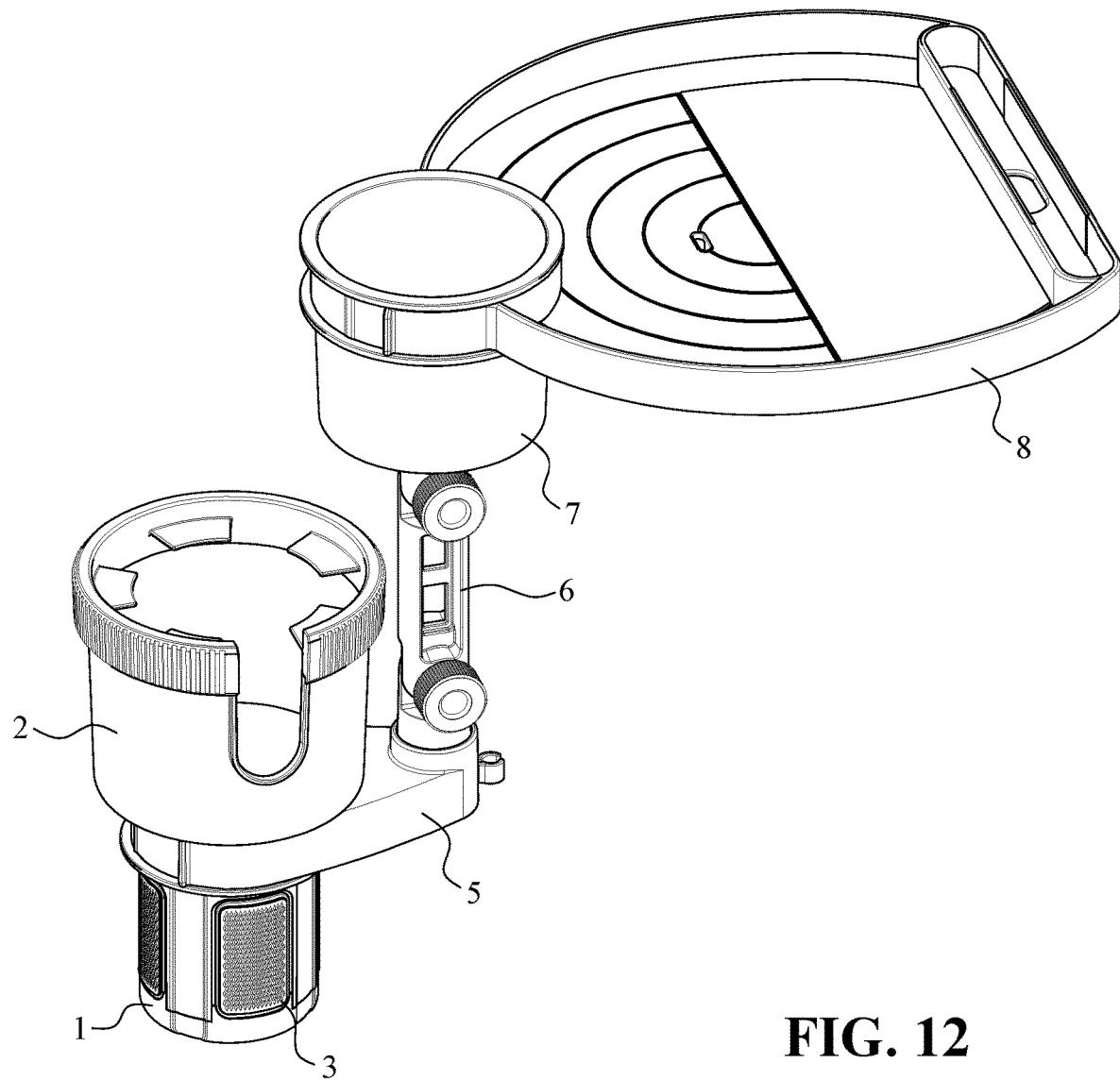


FIG. 12

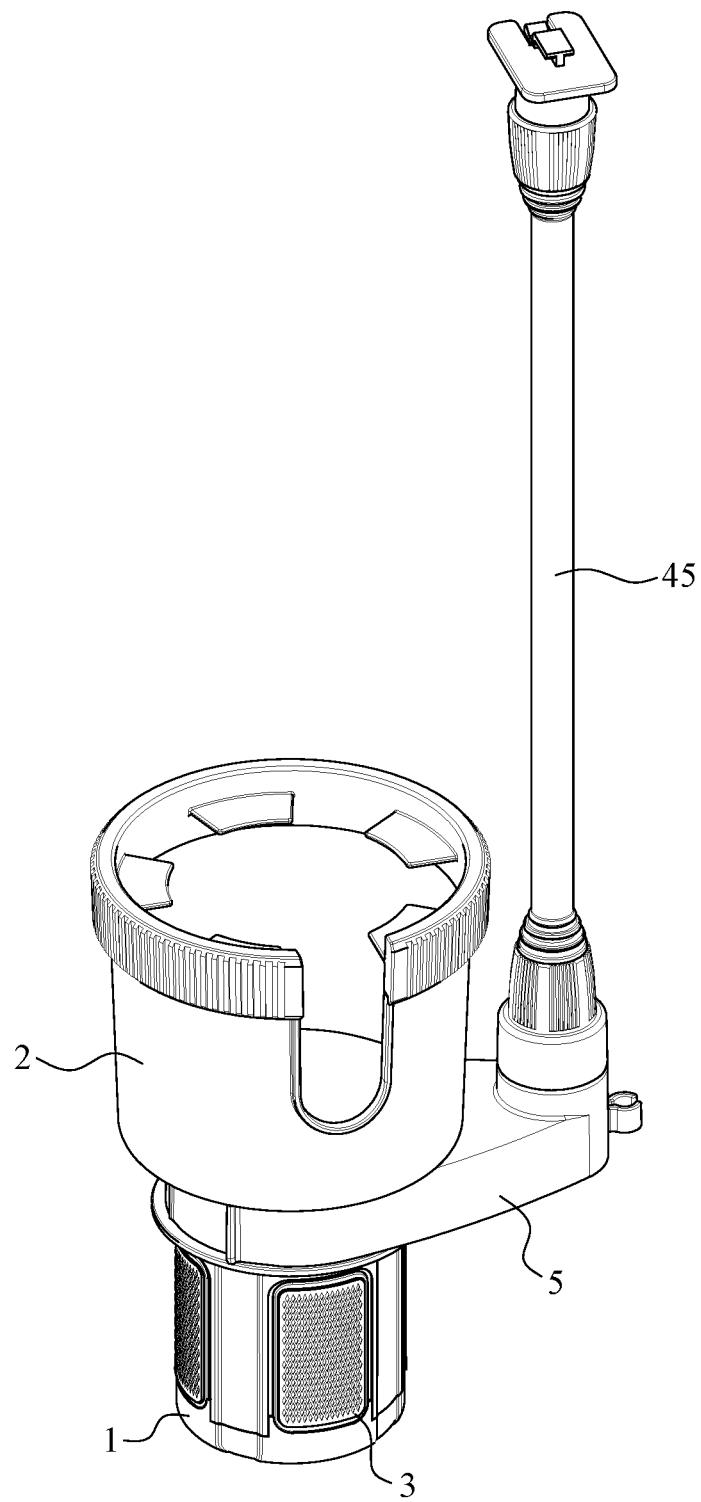


FIG. 13

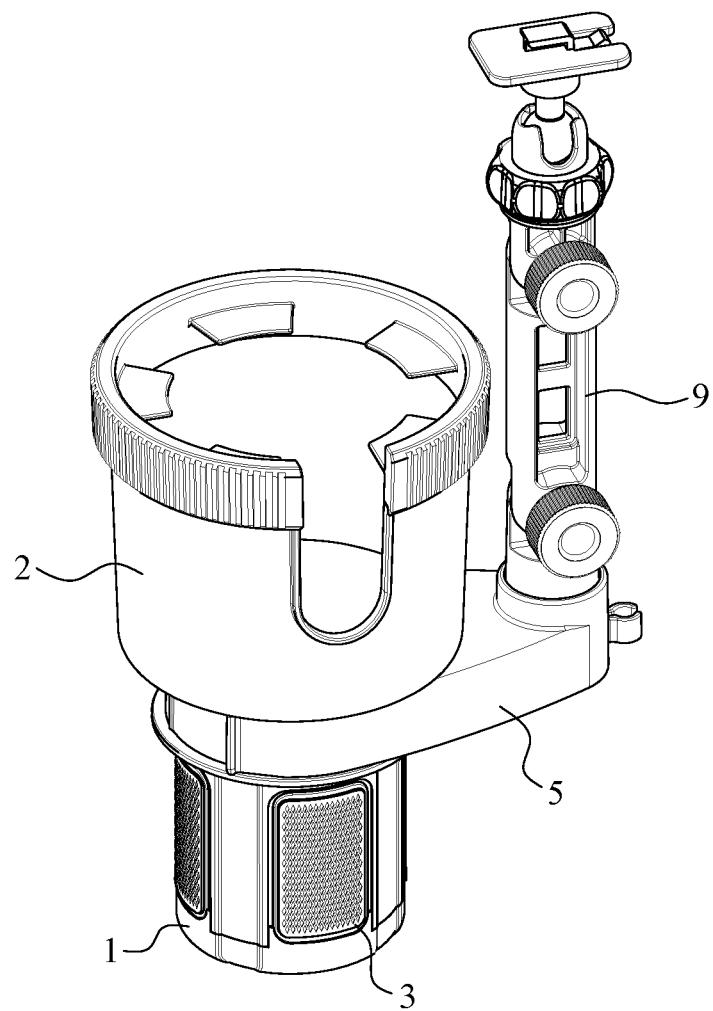


FIG. 14

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**CARRYING BRACKET FOR CUP HOLDER
USED IN VEHICLES**

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates generally to a carrying bracket, and more particularly, to a carrying bracket to be fixed to the cup holder used in a vehicle for mounting other accessories.

2. The Prior Arts

Every vehicle is provided with at least a set of cup holders for drivers or passengers to place canned drinks or coffee cups. However, with the popularity of electronic products, the old design used in vehicles is no longer suitable for use. Some manufacturers have designed a carrying bracket to be installed on the cup holder, and the carrying bracket provides additional clamping devices, extension platforms, larger cup holders, etc., for drivers or passengers to hold mobile phones or for other purposes.

The common carrying bracket generally uses a plurality of outwardly expandable support members to tightly contact the inner wall of the cup holder to achieve a fixing effect. However, different types of vehicles may provide different sizes of the cup holders. Therefore, the carrying bracket is usually only suitable for cup holders within a small size range. For manufacturers, the provision of different sets of carrying brackets to accommodate cup holders of different sizes is a big burden on development costs. For the user, if the car is replaced, the old carrying bracket cannot be used and must be purchased again, which is not cost-effective. For this reason, the inventor of the present invention proposes an improved structure

SUMMARY OF THE INVENTION

To solve the above problems, the primary objective of the present invention is to provide a carrying bracket for the cup holder used in vehicles, which is mainly provided with an expansion unit that can adjust the length and increase the applicable size, and can still achieve a good pressing effect, so as to bring excellent convenience and reduce costs for users or manufacturers.

In order to achieve the aforementioned objective, the present invention utilizes the following technical solutions:

The present invention is a carrying bracket for cup holder used in vehicles, including: a base unit, a rotating unit, and a plurality of expansion units; the outer wall of the base unit being disposed with a plurality of through holes; the rotating unit being mounted on the base unit and rotatable without detachment, the rotating unit having a spiral guide groove facing the base unit; the expansion units being installed in the base unit through the through hole at corresponding positions, and the expansion unit comprising, from inside to outside, a moving part and a wall support; the wall support for installing the moving part with adjustable position, after adjustment, the length of the expansion unit being changed; each moving part having a guide block and the plurality of guide blocks all located in the spiral guide groove, and when the rotating unit rotating, each of the moving parts linearly moving and protruding outward through the corresponding through hole.

In a preferred embodiment, the moving part has at least two sets of latch slots, each set of latch slots is distributed

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on two corresponding vertical walls of the moving part, and the wall support also comprises a U-shaped sheath element, the sheath element has a convex strip on two opposite inner walls, and the wall support is fixed to the moving part when the convex strip is inserted into the latch slot.

In a preferred embodiment, the latch slot has at least one convex point, the convex strip also has the same number concave notches at corresponding positions of concave notches, when the convex strip is inserted into the latch slot, the convex points are also located inside the corresponding notches.

In a preferred embodiment, the base unit has a plurality of guide channels, each of the guide channels corresponds to the through hole, when the rotating unit rotates, the moving part moves in the guide channel and extends through the through hole.

In a preferred embodiment, a holder is installed in the base unit, the holder has a plurality of sliding grooves, and each of the moving parts also has a holding block, the holding block protruding from the bottom of the moving part and is located in the sliding grooves of the holder when assembled.

In a preferred embodiment, the base unit has a receiving base with an opening facing upward, the bottom of the rotating unit has a round piece, and the spiral guide groove is formed on an end surface of the round piece facing the base unit, the round piece rotates in the receiving base.

In a preferred embodiment, a screw rod is installed in the center of the base unit, and the screw rod penetrates the rotating unit and is locked to the base unit, so that the rotating unit is rotatable but not disengaged from the base unit.

In a preferred embodiment, the outer wall of the top of the base unit further comprises a pivotal circular wall, and the pivotal circular wall comprises a plurality of longitudinal protruding teeth.

In a preferred embodiment, the present invention further comprises a rotating bracket, the rotating bracket has a C-shaped butt clamp, the inner wall of the butt clamp comprises a plurality of vertically distributed tooth grooves, when the rotating bracket is clamped by the butt clamp on the pivotal circular wall, and the protruding teeth are located in the tooth grooves.

Compared with the prior art, the present invention has the following specific effects:

1. The expansion unit of the present invention is composed of the moving part and the wall support. By adjusting the position of the wall support at the moving part, the radial length of the expansion unit can be changed, thereby expanding the applicable size of cup holders.
2. The present invention is easy to operate, easy to use and can be widely used in various products.
3. The present invention can be used with a set of rotating brackets for connecting various accessories of different types, which are convenient for users to choose.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will be apparent to those skilled in the art by reading the following detailed description of a preferred embodiment thereof, with reference to the attached drawings, in which:

FIG. 1 is a perspective view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

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FIG. 2 is a perspective view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention in the expanded state;

FIG. 3 is a perspective view of the first embodiment of a carrying bracket for a cup holder used in vehicles according to the present invention in the expanded state to the largest dimension;

FIG. 4 is an exploded view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention, with only part of the structure of the rotating unit drawn;

FIG. 5 is an enlarged schematic view of part of the components of the first embodiment of the carrying bracket created for the cup holder used in vehicles according to the present invention, with only one set of the expansion unit drawn;

FIG. 6 is a cross-sectional view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

FIG. 7A is a transverse cross-sectional view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention, with the expansion unit not expanded;

FIG. 7B is a transverse cross-sectional view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention, with the expansion unit expanded;

FIG. 8 is a schematic view of the second embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

FIG. 9 is a schematic view of the third embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

FIG. 10 is a schematic view of the fourth embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

FIG. 11 is a schematic view of the fifth embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

FIG. 12 is a schematic view of the sixth embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention;

FIG. 13 is a schematic view of the seventh embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention; and

FIG. 14 is a schematic view of the eighth embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The accompanying drawings are included to provide a further understanding of the invention, and are incorporated in and constitute a part of this specification. The drawings illustrate embodiments of the invention and, together with the description, serve to explain the principles of the invention.

Referring to FIG. 1 and FIG. 2, FIG. 1 is a perspective view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention; FIG. 2 is a perspective view of the first embodiment of the carrying bracket for the cup holder used in vehicles according to the present invention in the expanded state. The carrying bracket for the cup holder used in vehicles of the present invention includes a base unit 1, a rotating unit 2 and a plurality of expansion units 3. The outer wall of the base

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unit 1 is disposed with a plurality of through holes 11 arranged in a ring manner; the rotating unit 2 is mounted on the base unit 1, and can rotate but not detach from the base unit 1. The plurality of the expansion units 3 are installed in the base unit 1 through the through holes 11 at corresponding positions. When the rotating unit 2 rotates, the plurality of expansion units 3 can move linearly and extend outward through the corresponding through holes 11 (as shown in FIG. 2). When in use, the base unit 1 is placed in a cup holder in the car, and the expansion unit 3 moves outwards to achieve tight fixation. In addition, the expansion unit 3 is formed by sheathing a moving part 31 and a wall support 32. When the wall support 32 is adjusted the installation position of the moving part 31, the length of the expansion unit 3 extending outward can be increased (as shown in FIG. 3), thereby expanding the size suitable for the cup holder. In the present embodiment, the rotating unit 2 provides a large-sized cup holder, but is not limited to the above. The present invention can also be directly designed with the required shape or installed with various accessories, such as a platform, a flexible hose bracket, or clamping device, and so on, to achieve other different usages, which will be described in the following embodiments.

The following first gives a detailed description of the structure of each component. FIG. 4 is an exploded view of the present invention, wherein only a part of the rotating unit 2 is drawn, and FIG. 5 shows an enlarged schematic view of the main component:

The base unit 1 is a cylindrical base with an opening 25 facing upward, and a plurality of through holes 11 is disposed around the outer wall. The base unit 1 may comprise one or more components. In the present embodiment, the base unit 1 comprises a shell 12 and a base 13, and the plurality of through holes 11 are formed on the outer 30 circumferential wall after the shell 12 and the base 13 are assembled. In addition, a plurality of guide channels 14 is formed at the base 13 by a plurality of upright walls, and each guide channel 14 corresponds to one through hole 11 after assembly. The expansion unit 3 can move in the 35 guiding channel 14 and extend outward through the through hole 11. A receiving base 15 is formed in the upward opening of the shell 12, and the receiving base 15 is for installing and rotating the rotation unit 2 herein. The base unit 1 is additionally provided with a screw rod 16, which penetrates the rotating unit 2 and the base 13 from top to bottom during 40 assembly, and a nut 17 locks the bottom end of the screw rod 16 to fix the position of the shell 12 together with the base 13. However, the rotating unit 2 is rotatable but will not be separated from the base unit 1. In addition, the base unit 1 45 can be optionally disposed with a holder 18 in the base 13. The holder 18 has a plurality of sliding grooves 181, and the plurality of sliding grooves 181 are arranged like a cross. The sliding grooves 181 are used to assist the expansion unit 3 to move smoothly. The base unit 1 has a pivotal circular 50 wall 19, located on the outer wall of the shell 12 close to the top. The pivotal circular wall 19 further comprises several longitudinal protruding teeth 191. The pivotal circular wall 19 is for other accessories to be installed herein, which will be described in later embodiments.

The rotating unit 2 has a spiral guide groove 21 facing the base unit 1. In the present embodiment, the bottom of the rotating unit 2 has a smaller round piece 22, and the spiral guide groove 21 is formed at the end surface of the round piece 22 facing the base unit 1. After assembling, the round 55 piece 22 rotates in the receiving base 15. In the present embodiment, the upper half of the rotating unit 2 is a large-sized cup holder, and the lower half is designed 60

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according to usage requirements. Herein, one of the embodiments is provided for explanation. The lower half of the rotating unit 2 includes a matching piece 23 and a round plate 24. The matching piece 23 is installed in the round piece 22 for the screw rod 16 to penetrate the matching piece 23 and then extend downward to be locked. The round plate 24 is attached to the inside of the rotating unit 2, as shown in FIG. 6. When the rotating unit 2 rotates, the round plate 24 and the round piece 22 are rotated synchronously, but the matching piece 23 and the screw rod 16 are fixed.

Refer to FIG. 5. The expansion unit 3 is in the shape of a three-dimensional rectangular shell, which includes, from inside to outside, a moving part 31 and a wall support 32. The wall support 32 is installed on the moving part 31 and can be adjusted in position, thereby changing the length of the expansion unit 3 and expanding the applicable size range of the cup holder. Therefore, the moving part 31 has at least two sets of latch slots 311, and each set of the latch slots 311 is distributed on two opposite two vertical walls of the moving member 31. Preferably, one of the latch slots 311 is located at the position where the moving part 31 is closest to the base unit 1, and the other latch slot 311 is far away from the base unit 1. The wall support 32 has a U-shaped sheath element 321. The sheath element 321 has a convex strip 322 on each of the facing inner walls. When the convex strip 322 is inserted into the latch slot 311, the wall support 32 is fixed to the moving part 31. In addition, to prevent from loosening, the latch slot 311 is provided with at least one convex point 312, and the convex strip 322 also has the same number of the concave notch 323 at positions corresponding to the convex points. When the convex strip 322 is inserted into the latch slot 311, the convex point 312 will also be located in the concave notch 323.

The moving part 31 further comprises a guide block 314 and a holding block 315. The guide block 314 protrudes from the top of the moving part 31 and is located in the spiral guide groove 21 during assembly. The holding block 315 protrudes from the bottom of the moving part 32 and is located in the sliding groove 181 of the holder 18 during assembly. During assembly, each expansion unit 3 is installed in the guide channel 14, and the guide block 314 is located in the spiral guide groove 21, as shown in FIG. 7A. When the rotating unit 2 rotates, the guide block 314 moves along the spiral guide groove 21, and each moving part 31 can move linearly and extend out through the corresponding through hole 11, as shown in FIG. 7B. In addition, the sliding of the holding block 315 in the sliding groove 181 also assists the moving part 31 to move more smoothly. The outer wall of the wall support 32 facing outward is provided with a non-slip pad 324 to increase the friction at contacting the inner wall of the cup holder.

From the above description, it can be seen that the carrying bracket of the present invention is installed on the cup holder used in the car, and the rotating unit 2 on the base unit 1 can be rotated to drive the expansion unit 3 from the base unit 1 to extend from inside to outside, as shown in FIG. 2 to achieve pressing on the inner wall of the cup holder. When the size of the cup holder is too large, the expansion unit 3 needs to be expanded to the maximum state, then the wall support 32 is pulled downwards to exit the moving part 3, as shown in FIG. 3, and then use the convex strip 322 to align with the outermost latch slot 311 and then inserted, so that the position of the wall support 32 on the moving part 31 can be changed. The subsequent operation mode is the same as before. The rotating unit 2 is rotated to partially

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retract the expansion unit 3 in the base unit 1, and then placed on the cup holder before rotating the rotating unit 2 to expand.

The design of the present invention is widely applicable to various products. For example, the partial structure of the rotating unit 2 can be changed into a variety of different embodiments. The actual specific embodiments will be explained as follows. As shown in FIG. 2, the rotating unit 2 is a large-sized cup holder. As such, the carrying bracket 10 of the present invention is installed at the cup holder. Instead of losing a cup holder, the present invention can provide a large-sized cup holder to meet the needs of users. In this embodiment, a mug can be placed.

As shown in FIG. 8, the top of the rotating unit 2A is a platform, on which a suction cup holder 41 can be attached onto, and a clamping device 43 is mounted on the suction cup holder 41 to provide a hands-free device for mobile phone.

FIG. 9 is the third embodiment of the present invention. 15 The upper half of the rotating unit 2B is connected with a hose-type bracket 45, so that the hose-type bracket 45 can be installed with a clamping device for holding the mobile phone.

FIG. 10 is the fourth embodiment of the present invention. 20 The carrying bracket for the cup holder used in vehicles further includes a rotating bracket 5 with a C-shaped butt clamp 51. The inner wall of the butt clamp 51 has a plurality of tooth grooves 52 distributed vertically. The rotating bracket 5 is clamped on the pivotal circular wall 19 by the 25 butt clamp 51, and the position can be adjusted by rotation. When the protruding teeth 191 are located in the tooth grooves 52, the rotating bracket 5 can be positioned to prevent from rotating freely. The rotating bracket 5 can also be equipped with different accessories here to increase the 30 scope of application of the product.

FIG. 11 is the fifth embodiment of the present invention. 35 In the present embodiment, the rotating bracket 5 is connected to a set of joint components 6, and another small cup holder 7 can be mounted on the joint components 6. This 40 design can meet the needs of users who need two sets of cup holders.

FIG. 12 is the sixth embodiment of the present invention. 45 In the present embodiment, a set of receiving plates 8 can also be used. The receiving plates 8 can be installed on the small cup holder 7 to provide more platform surface for users.

FIG. 13 is the seventh embodiment of the present invention. 50 In the present embodiment, the rotating bracket 5 is connected to a set of hose brackets 45. The hose-type bracket 45 can be equipped with a clamping device for clamping the mobile phone.

FIG. 14 is the eighth embodiment of the present invention. 55 In the present embodiment, the rotating bracket 5 is also connected to a set of shorter bracket type joints 9 which can be equipped with a clamping device for clamping the mobile phone.

Although the present invention has been described with reference to the preferred embodiments thereof, it is apparent to those skilled in the art that a variety of modifications 60 and changes may be made without departing from the scope of the present invention which is intended to be defined by the appended claims.

What is claimed is:

1. A carrying bracket for a cup holder used in vehicles, 65 comprising:
a base unit having an outer wall disposed with a plurality of through holes;

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a rotating unit mounted on the base unit, the rotating unit having a spiral guide groove facing the base unit and being rotatable without disengagement; and a plurality of expansion units installed in the base unit through the plurality of through holes at corresponding positions, each of the expansion units comprising a moving part and a wall support for installing the moving part with an adjustable position, the moving part having a guide block located in the spiral guide groove and moving linearly and protruding outward through a corresponding through hole when the rotating unit rotates;

wherein a length of a respective expansion unit of the expansion units changes according to the adjustable position of the moving part of the respective expansion unit.

2. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein the moving part of each of the expansion units has at least two sets of latch slots, each set of the latch slots is distributed on two corresponding vertical walls of the moving part, and the wall support of each of the expansion units also comprises a U-shaped sheath element, the sheath element has two convex strips respectively on two opposite inner walls, and the wall support is fixed to the moving part when the two convex strips are inserted into one set of the latch slots.

3. The carrying bracket for a cup holder used in vehicles according to claim 2, wherein each latch slot has at least one convex point, each convex strip also has at least one concave notch each corresponding to one of the at least one convex point, and when the convex strip is inserted into a corresponding latch slot, each of the at least one convex point is also located inside a corresponding one of the at least one concave notch.

4. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein the base unit has a plurality of guide channels, each of the guide channels corresponds to one of the through holes, and when the rotating unit rotates, the moving part of each of the expansion units moves in a

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respective guide channel and extends through the through hole corresponding to the respective guide channel.

5. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein a holder is installed in the base unit, the holder has a plurality of sliding grooves, the moving part of each of the expansion units also has a holding block, and the holding block protrudes from the bottom of the moving part and is located in the sliding grooves of the holder when assembled.

10 6. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein the base unit has a receiving base with an opening facing upward, the bottom of the rotating unit has a round piece, the spiral guide groove is formed on an end surface of the round piece facing the base unit, and the round piece rotates in the receiving base.

7. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein an anti-slip pad is disposed on an outer wall of the wall support of each of the expansion units.

20 8. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein a screw rod is installed in a center of the base unit, and the screw rod penetrates the rotating unit and is locked to the base unit, so that the rotating unit is rotatable but not disengaged from the base unit.

30 9. The carrying bracket for a cup holder used in vehicles according to claim 1, wherein the outer wall of the top of the base unit further comprises a pivotal circular wall, and the pivotal circular wall comprises a plurality of longitudinal protruding teeth.

10. The carrying bracket for a cup holder used in vehicles according to claim 9, further comprising a rotating bracket, the rotating bracket having a C-shaped butt clamp, an inner wall of the butt clamp comprising a plurality of vertically distributed tooth grooves; when the rotating bracket is clamped by the butt clamp on the pivotal circular wall, the protruding teeth are located in the tooth grooves.

* * * * *

Exhibit 5

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

1. (Currently Amended) A cupholder adapter configured for use with an existing cupholder on a vehicle, the cupholder adapter comprising:
 - a cylindrical cupholder having a hollow internal volume;
 - a collar attached to a top portion of the cylindrical cupholder, wherein the collar includes a plurality of tabs extending perpendicularly into the hollow internal volume, wherein the plurality of tabs comprises tabs of varying lengths and widths;
 - an adapter base coupled to the cylindrical cupholder, wherein the adapter base includes a plurality of legs configured to expand and retract such that the diameter of the adapter base is configured to expand from a minimum diameter to a maximum diameter[.];
 - an attachment member positioned on a bottom surface of the cylindrical cupholder, wherein the attachment member enables the coupling of the adapter base and the cylindrical cupholder via a mounting spacer attached to the adapter base; and,
wherein the attachment member comprises a number of mounting holes and the mounting spacer comprises a number of protrusions including a central protrusion having a hole, wherein a mounting hole of the number of mounting holes is configured to align with the central protrusion such that a fastener can extend through the mounting hole and the hole of the central protrusion,
2. (Original) The cupholder adapter of claim 1, wherein the plurality of legs are configured to expand and retract via rotation of the cupholder.

3. (Original) The cupholder adapter of claim 1, wherein the cylindrical cupholder is configured to be coupled to the adapter base in a variety of configurations including at least (a) the cylindrical cupholder's axis is aligned with the adapter base's axis; and (b) the cylindrical cupholder's axis is not aligned with the adapter base's axis.

4. (Canceled)

5. (Canceled)

6. (Currently Amended) The cupholder adapter of claim [[5]] 1, wherein the number of mounting holes of the attachment member enable multiple configurations of the cylindrical cupholder in relation to the adapter base including an aligned configuration and off-set configuration.

7. (Original) The cupholder adapter of claim 1, further comprising at least one spacer positioned between the cylindrical cupholder and the adapter base.

8. (Original) The cupholder adapter of claim 2, wherein a screw gear is provided to enable the movement of the plurality of legs via rotation.

9. (Currently Amended) The cupholder adapter of claim 1, wherein the minimum diameter is approximately 2.6 inches and the maximum diameter is approximately 3.8 inches.

10. (Canceled).

REMARKS/ARGUMENTS

Claims 1-3 and 6-9 are pending, claims 1 and 9 are amended, and claims 4-5 and 10 are canceled. No new matter is added.

Drawings

FIG. 6 was amended to add an element number to the fastener as required by the office action. Replacement sheet is submitted with this reply. No new matter is added.

Specification

Paragraph [0044] was amended to reflect the element number of the fastener in FIG. 6. No new matter is added.

Claim rejections 35 USC 112

Claim 9 was amended to remove the term “approximately.”

Allowable subject matter

Allowability of claims 5 & 6 is acknowledged.

Claim rejections 35 USC 103

Claims 1, 2, 7, 8, & 9 are rejected under 35 U.S.C 103 as being unpatentable by Fan (US 11254253).

Independent Claim 1 was amended to include the claim language of allowable claim 5, and intervening claim 4. Consequently, claim 1 should be allowable over Fan, and dependent claims 2-3 and 6-9 should be allowable for at least the same reasons.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Dated: March 13, 2023

Respectfully submitted,

By /Christopher Pilling/

Christopher Pilling

Reg. 66,771

1-707-473-8295

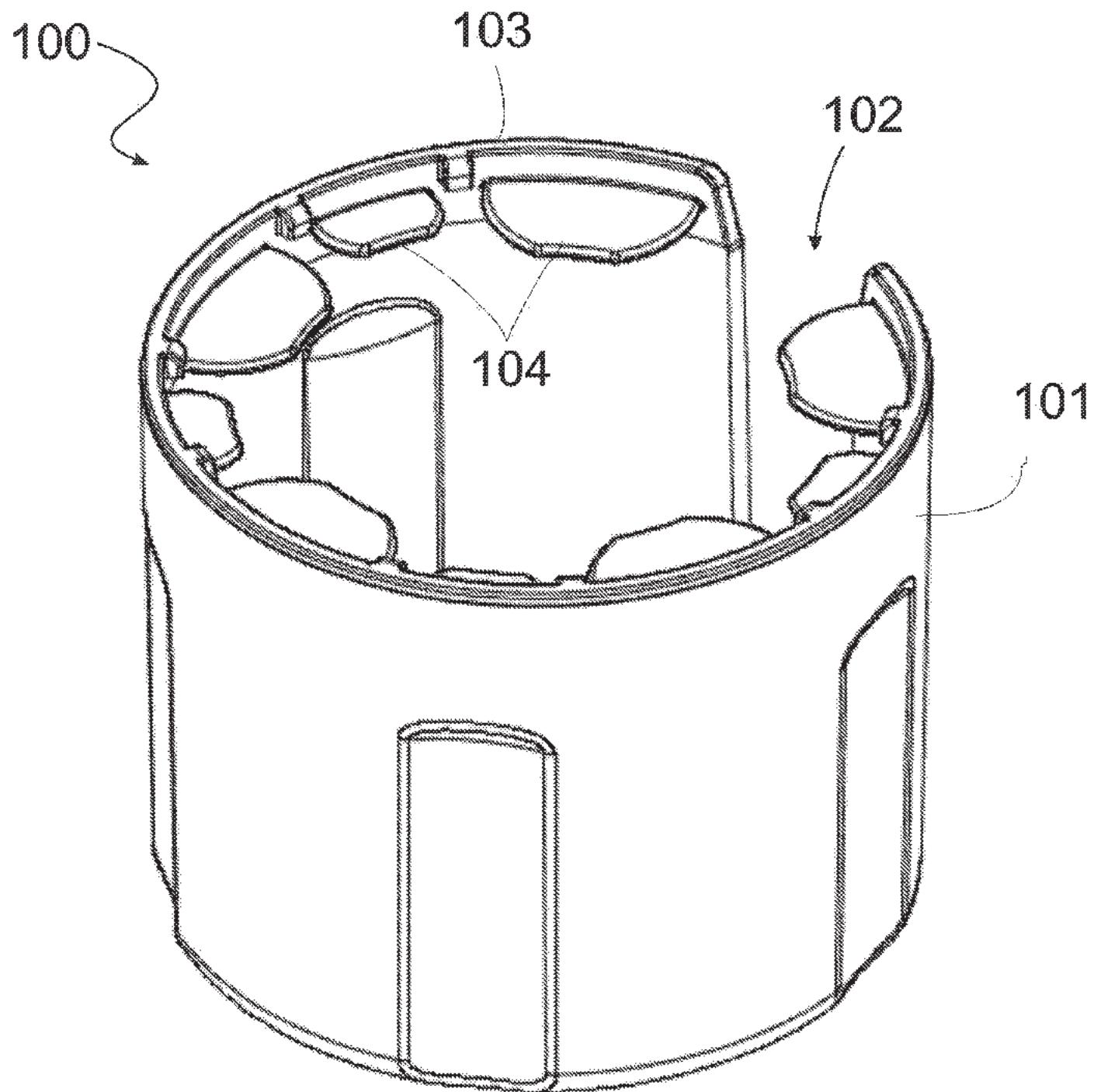
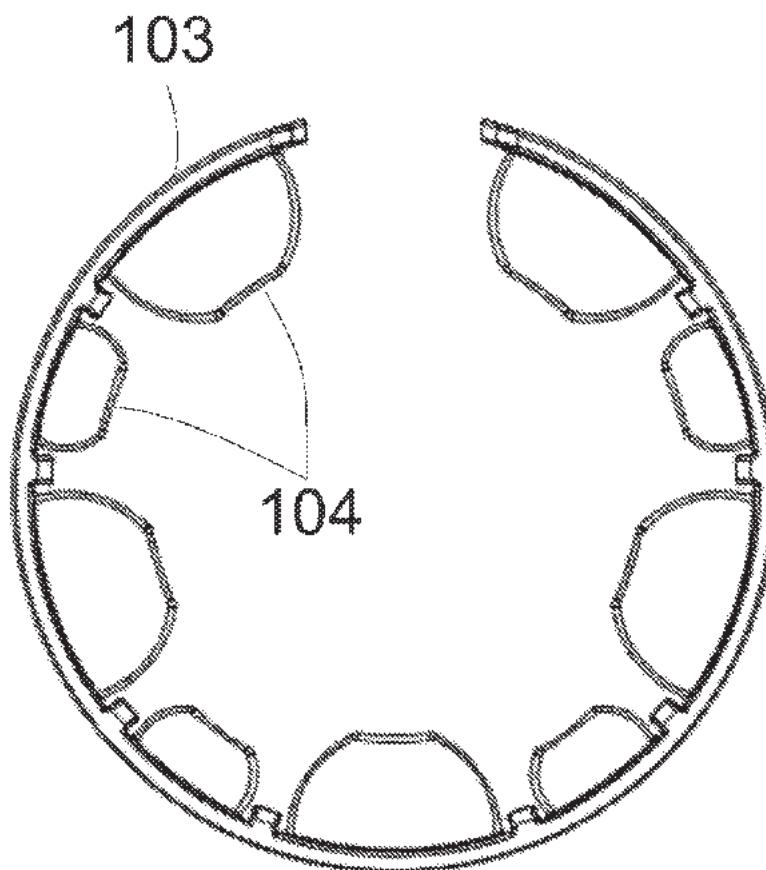
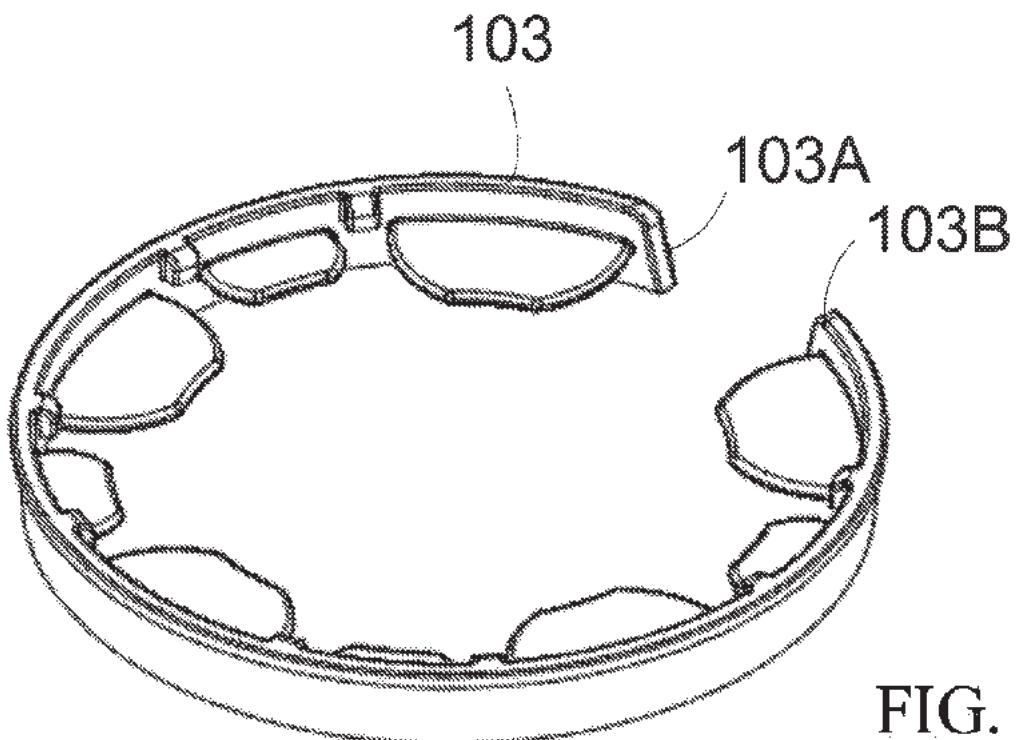


FIG. 1



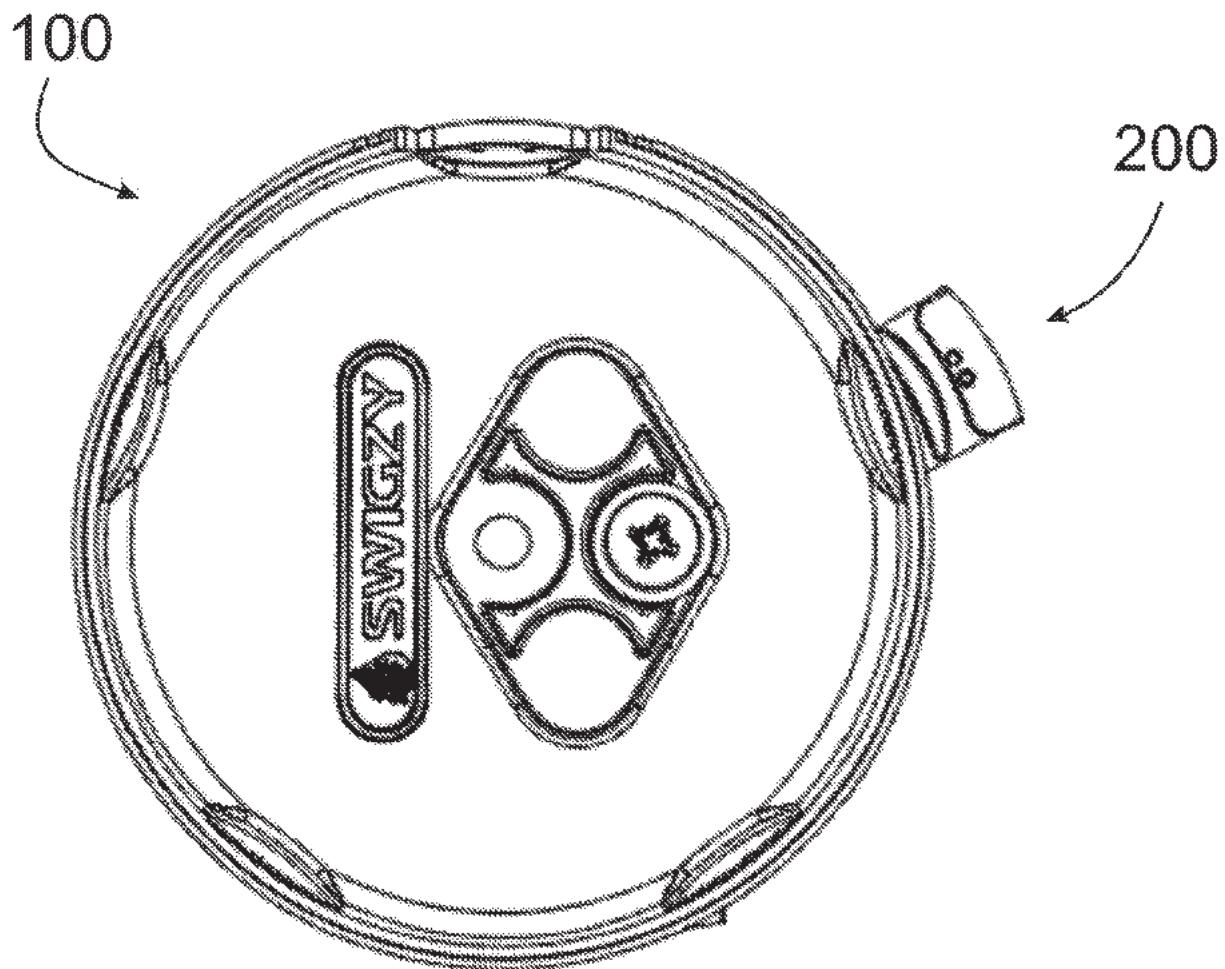


FIG. 4

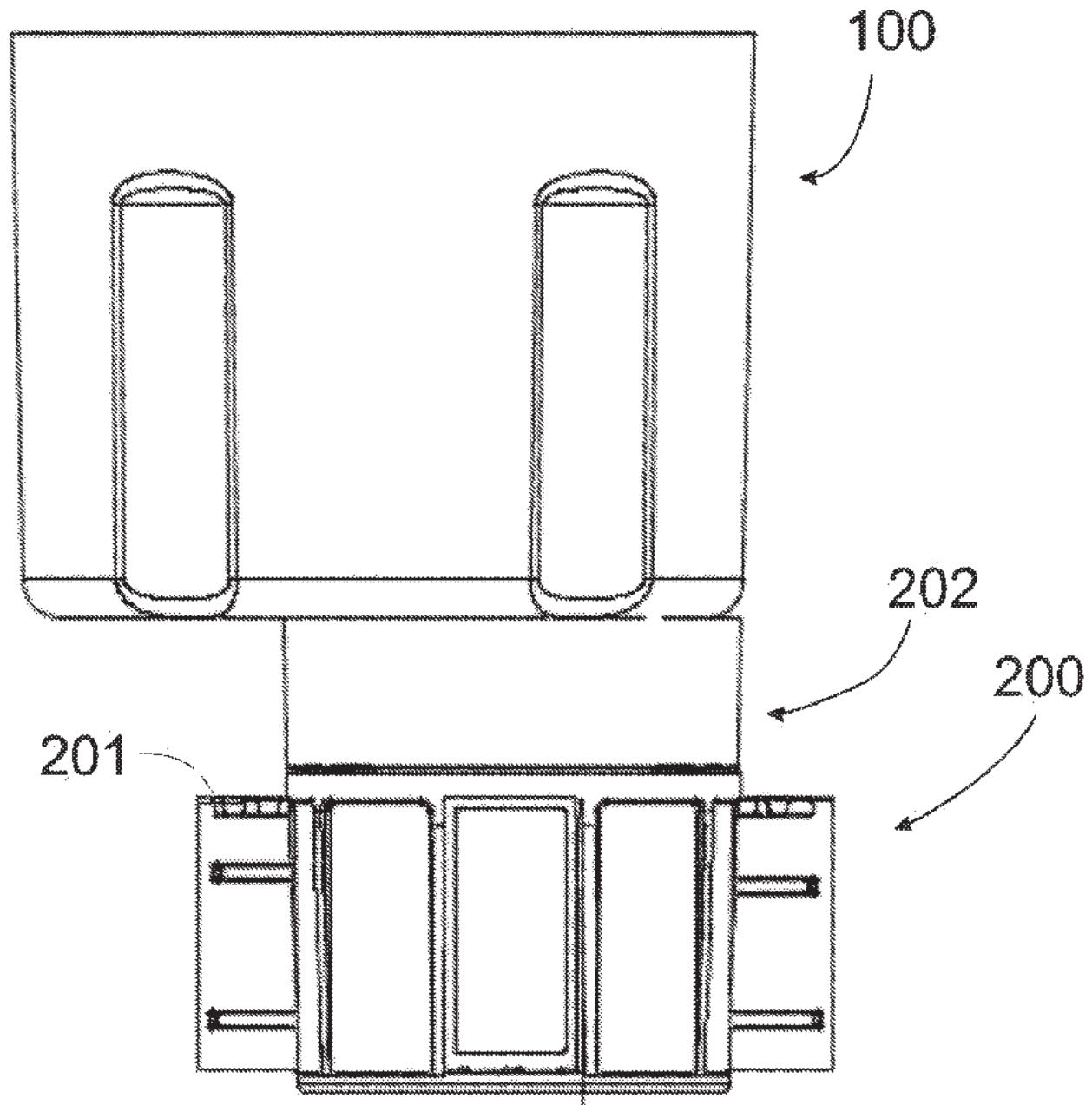


FIG. 5

REPLACEMENT SHEET

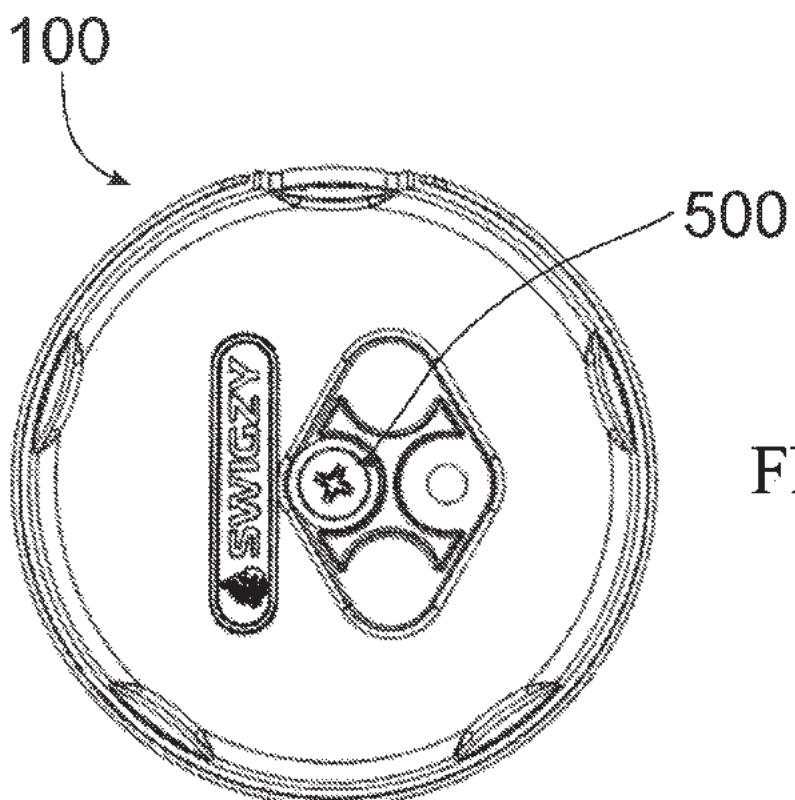


FIG. 6

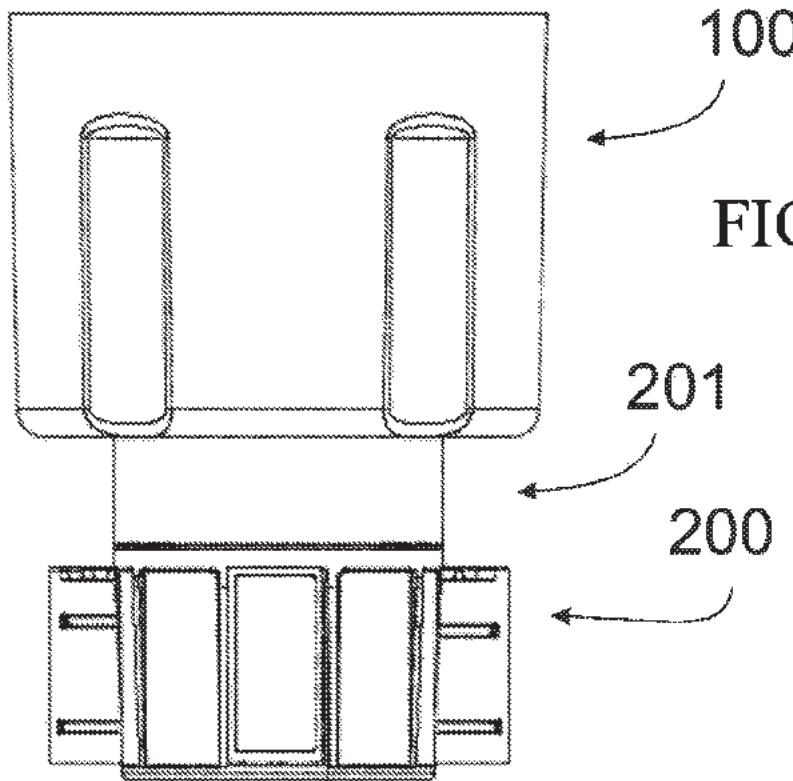
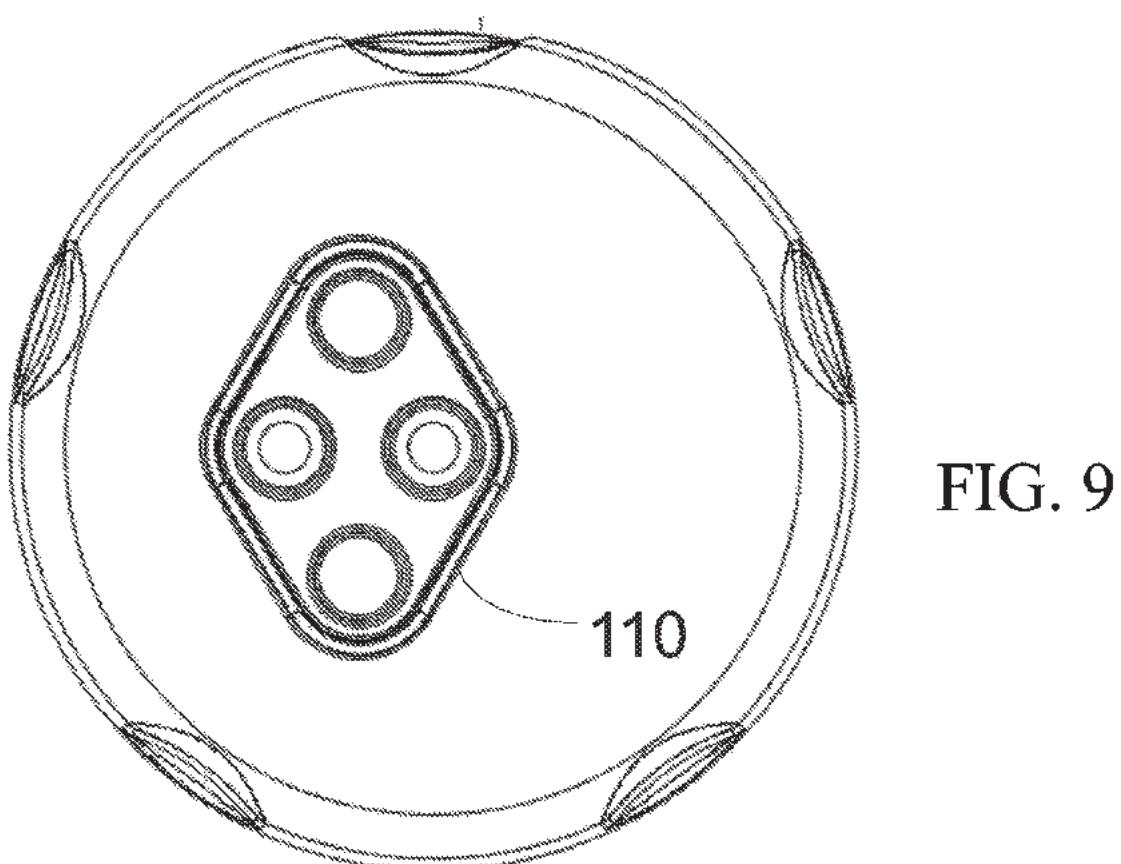
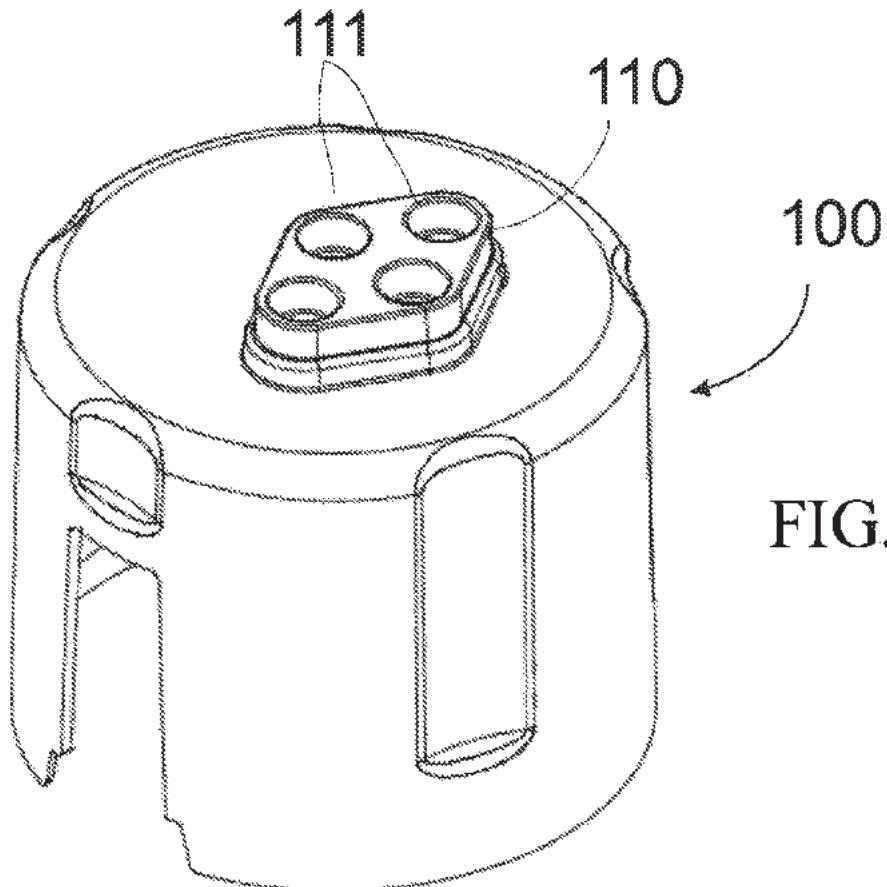


FIG. 7



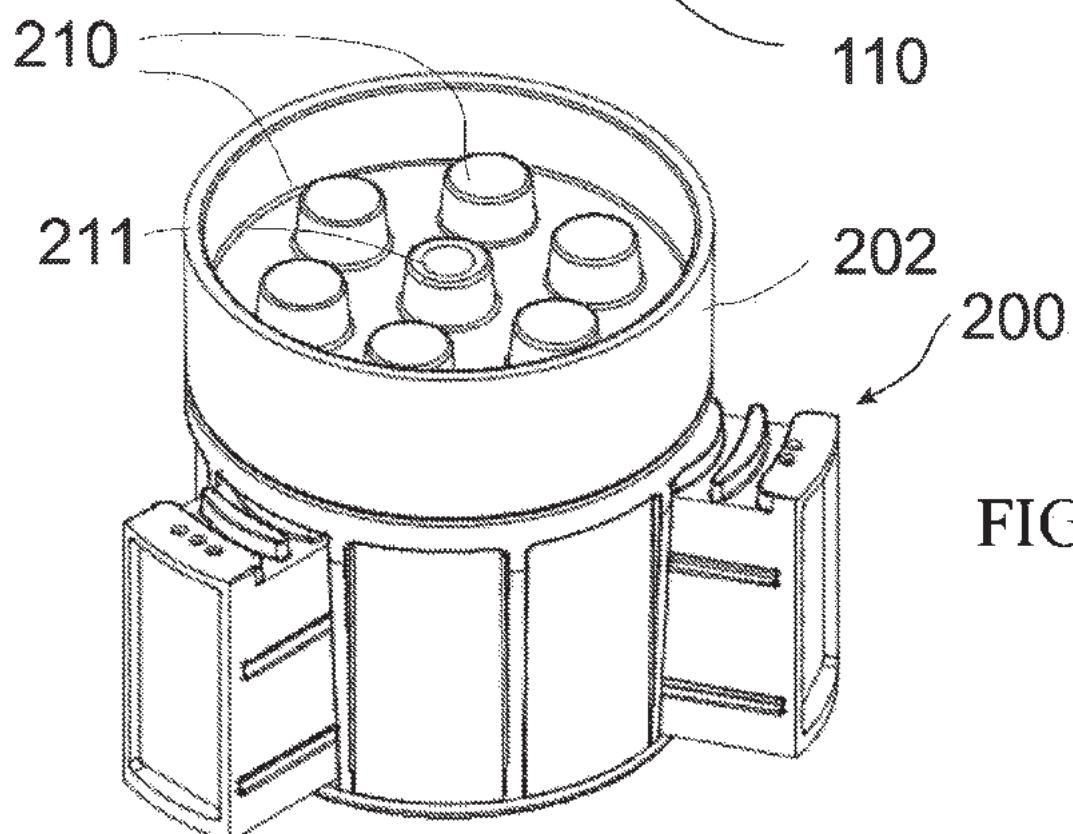
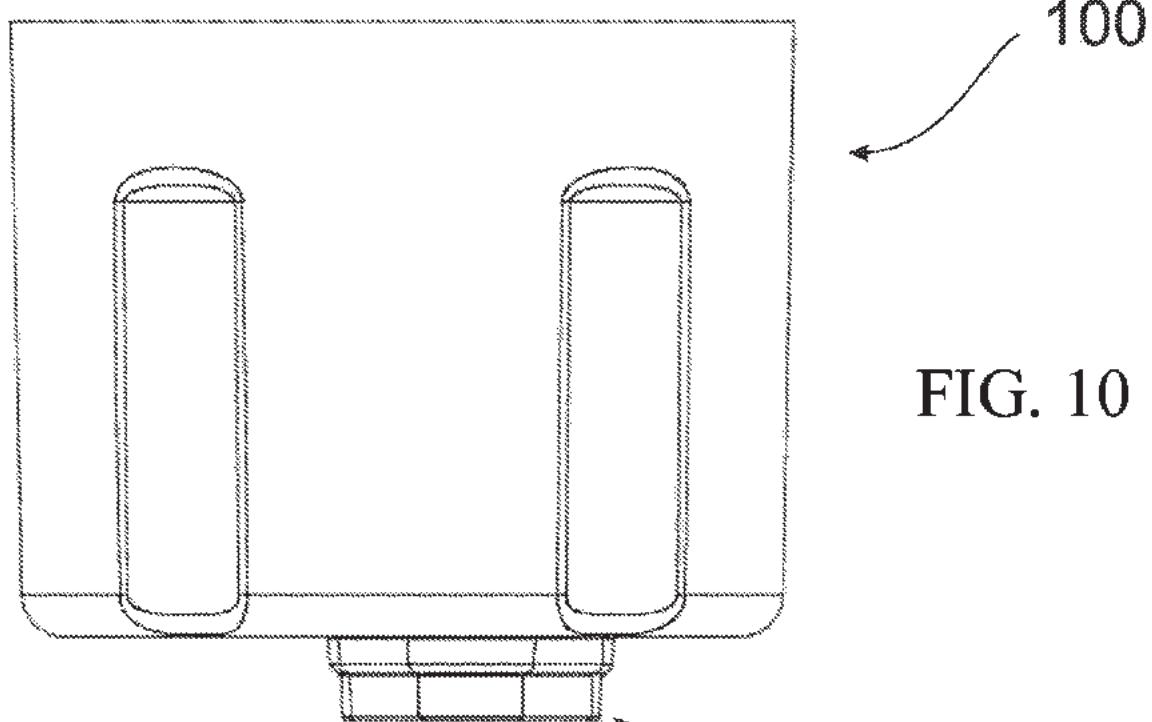
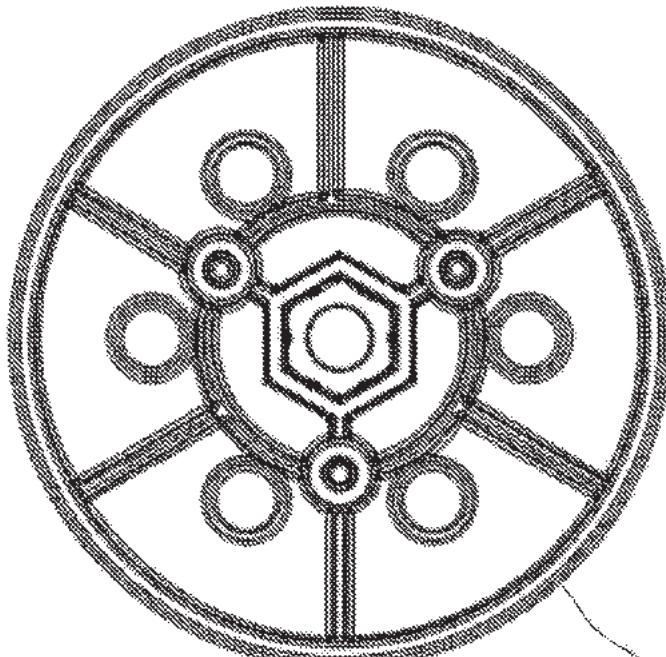
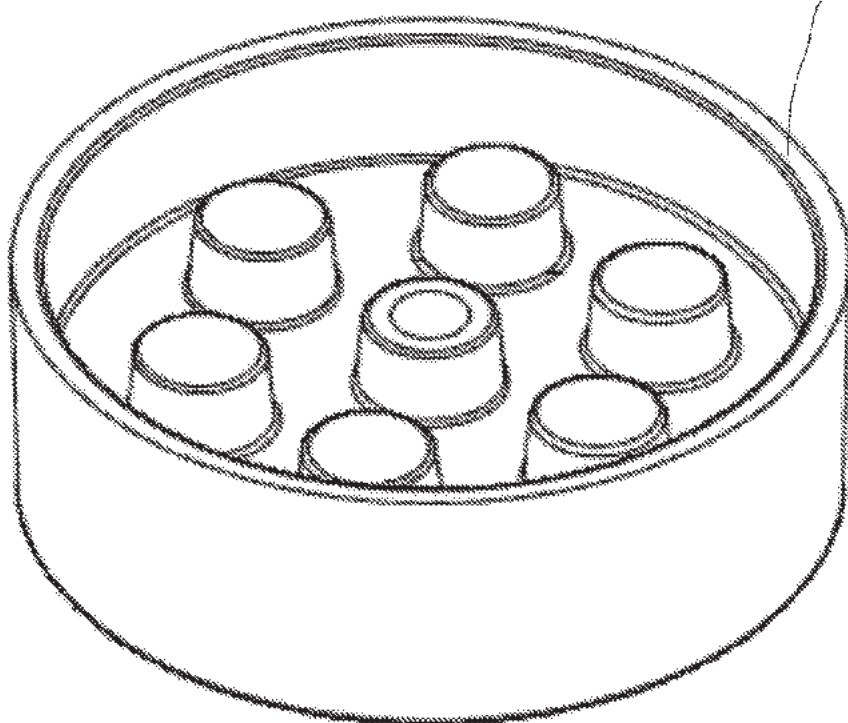


FIG. 12

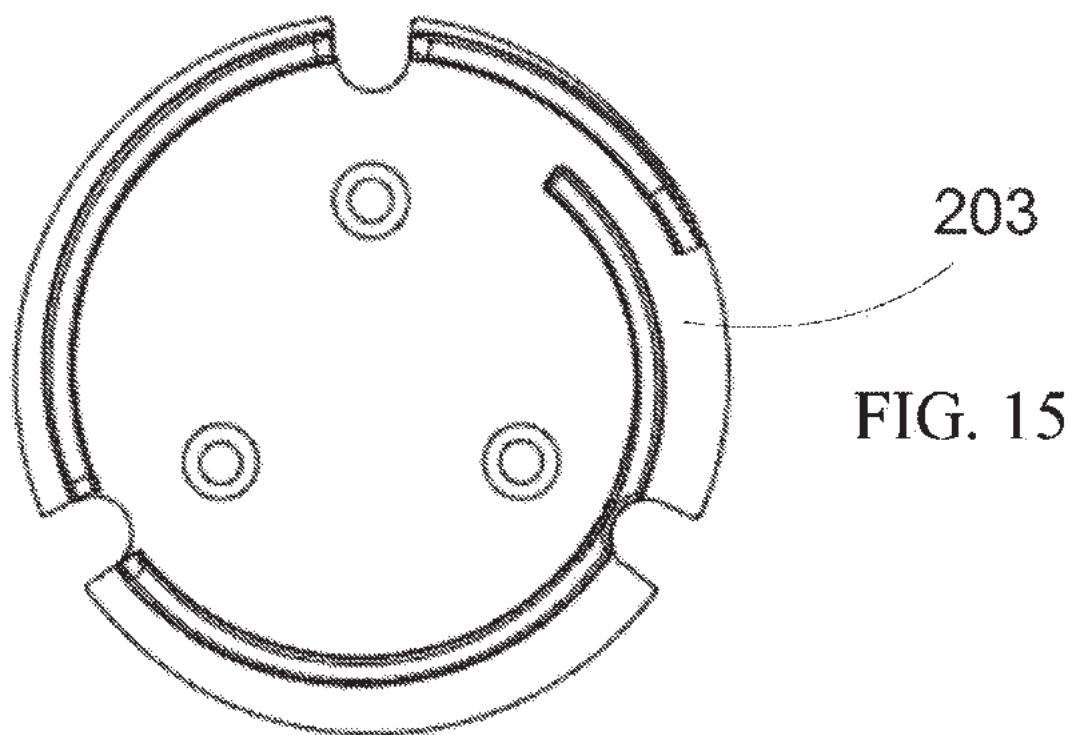
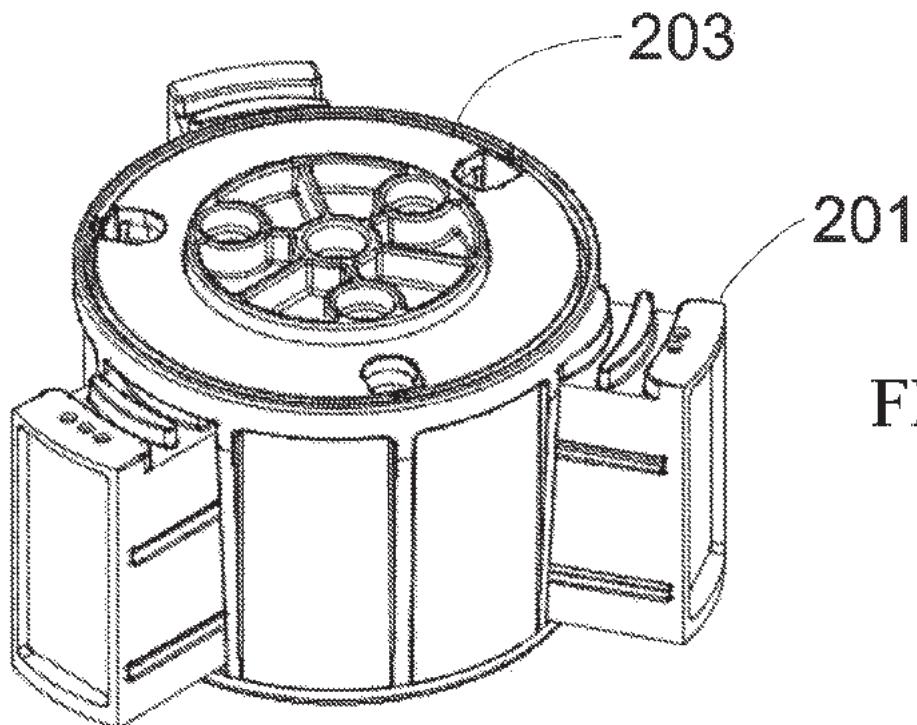


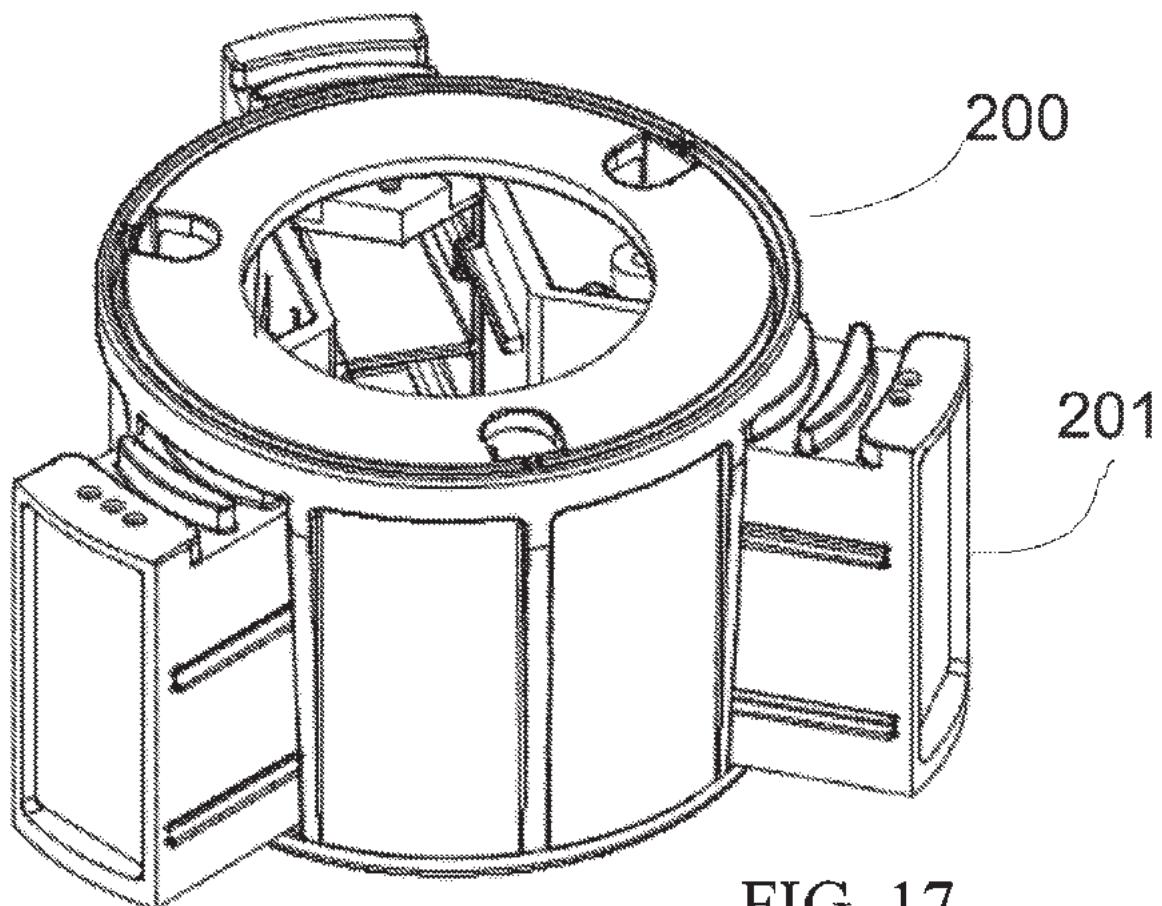
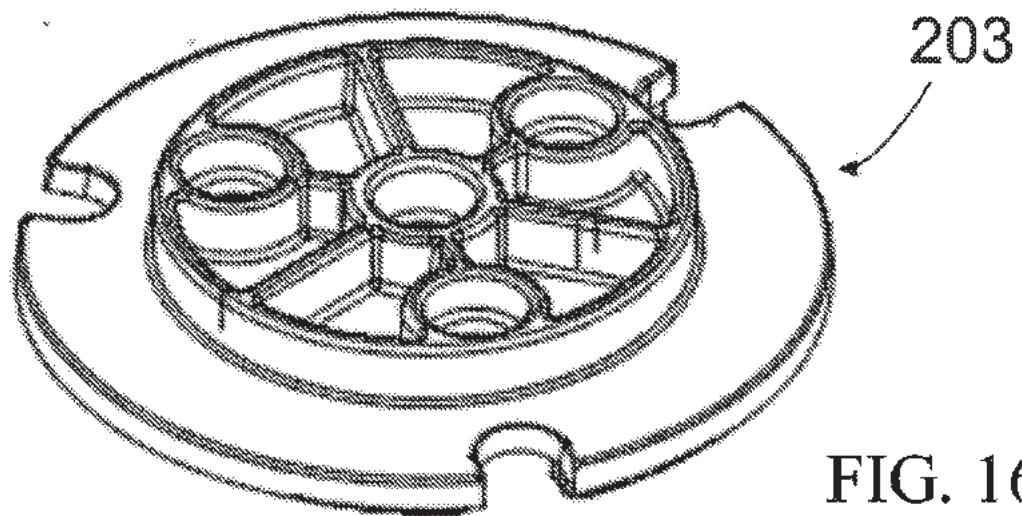
202

FIG. 13



PLA001237





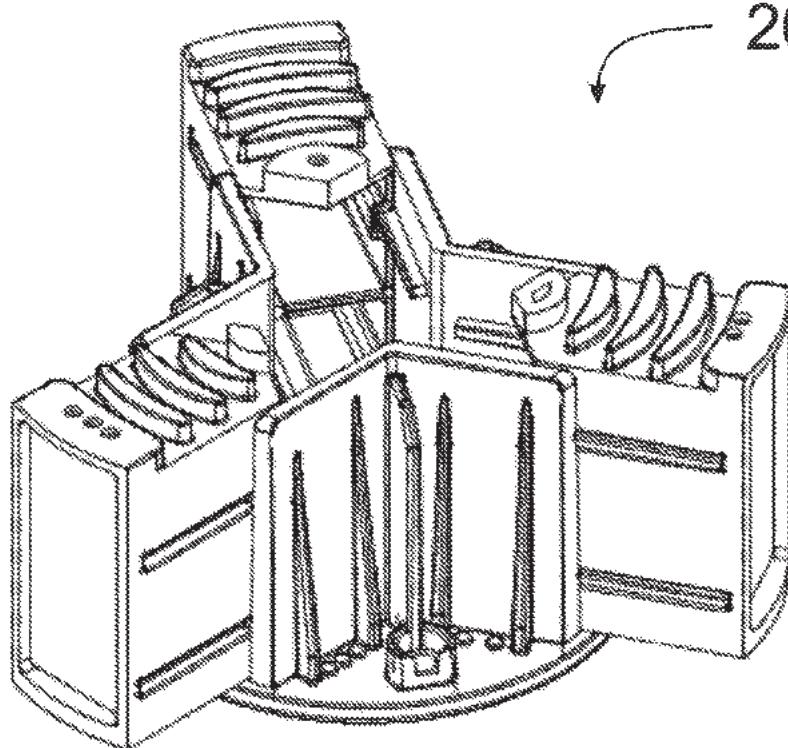


FIG. 18

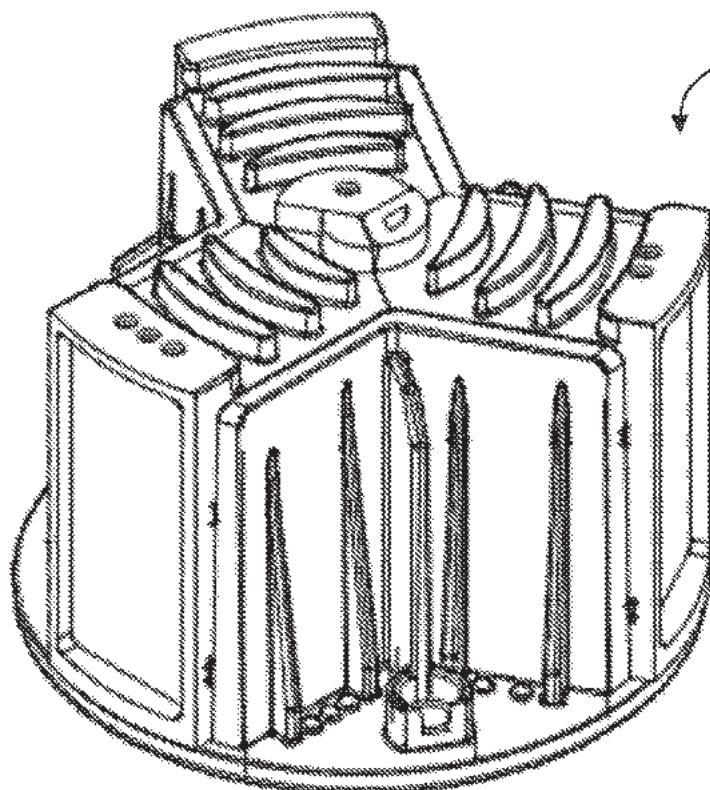


FIG. 19

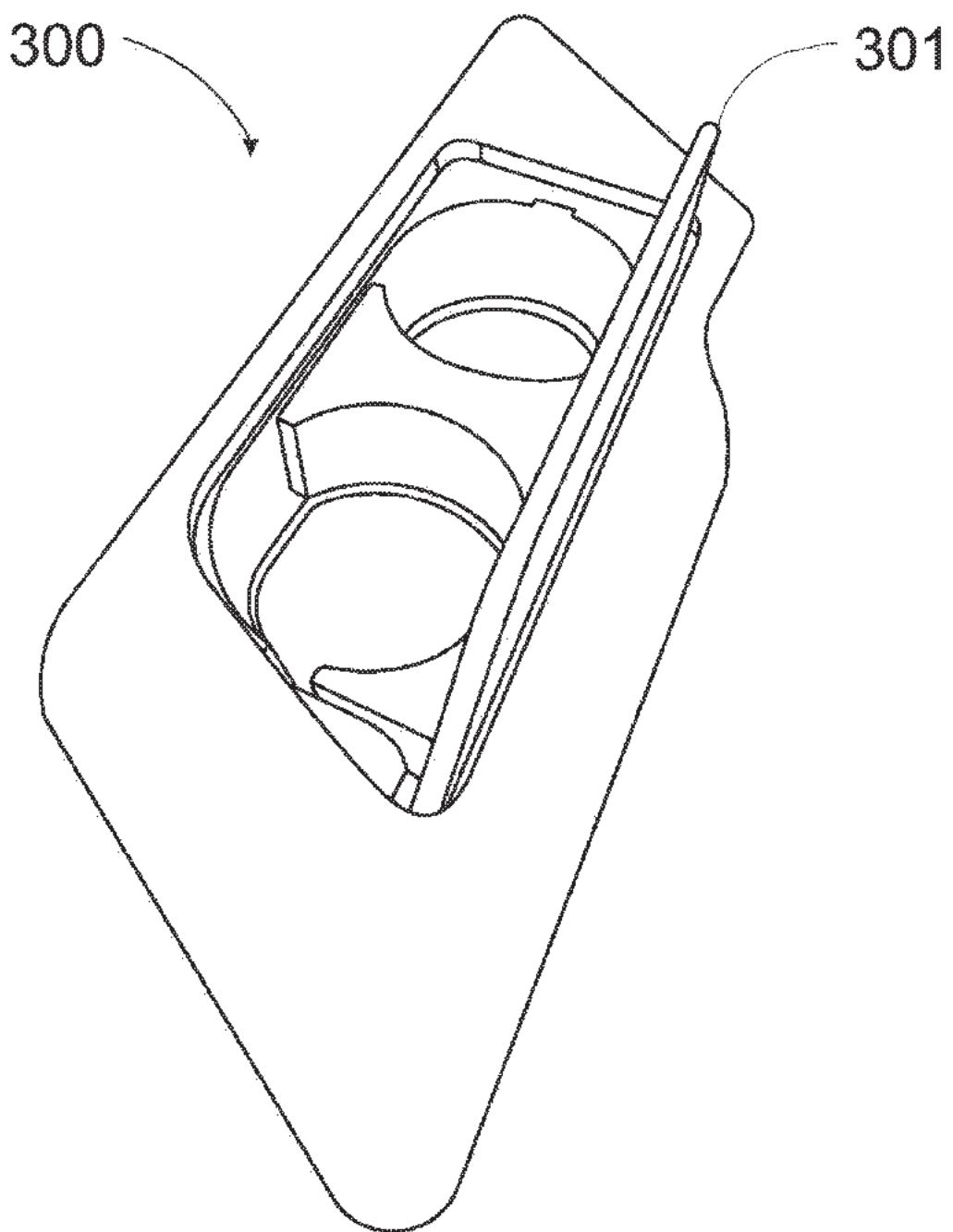


FIG. 20

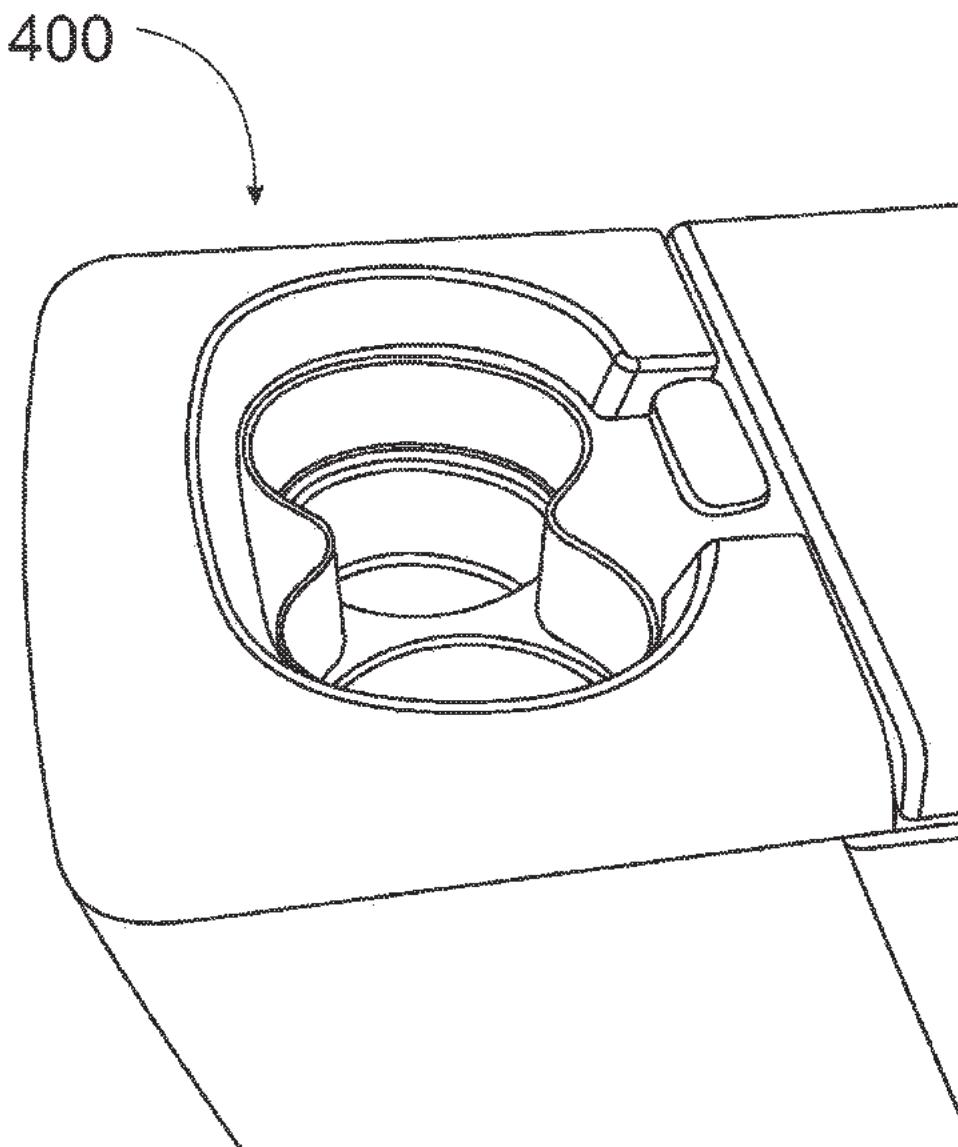


FIG. 21

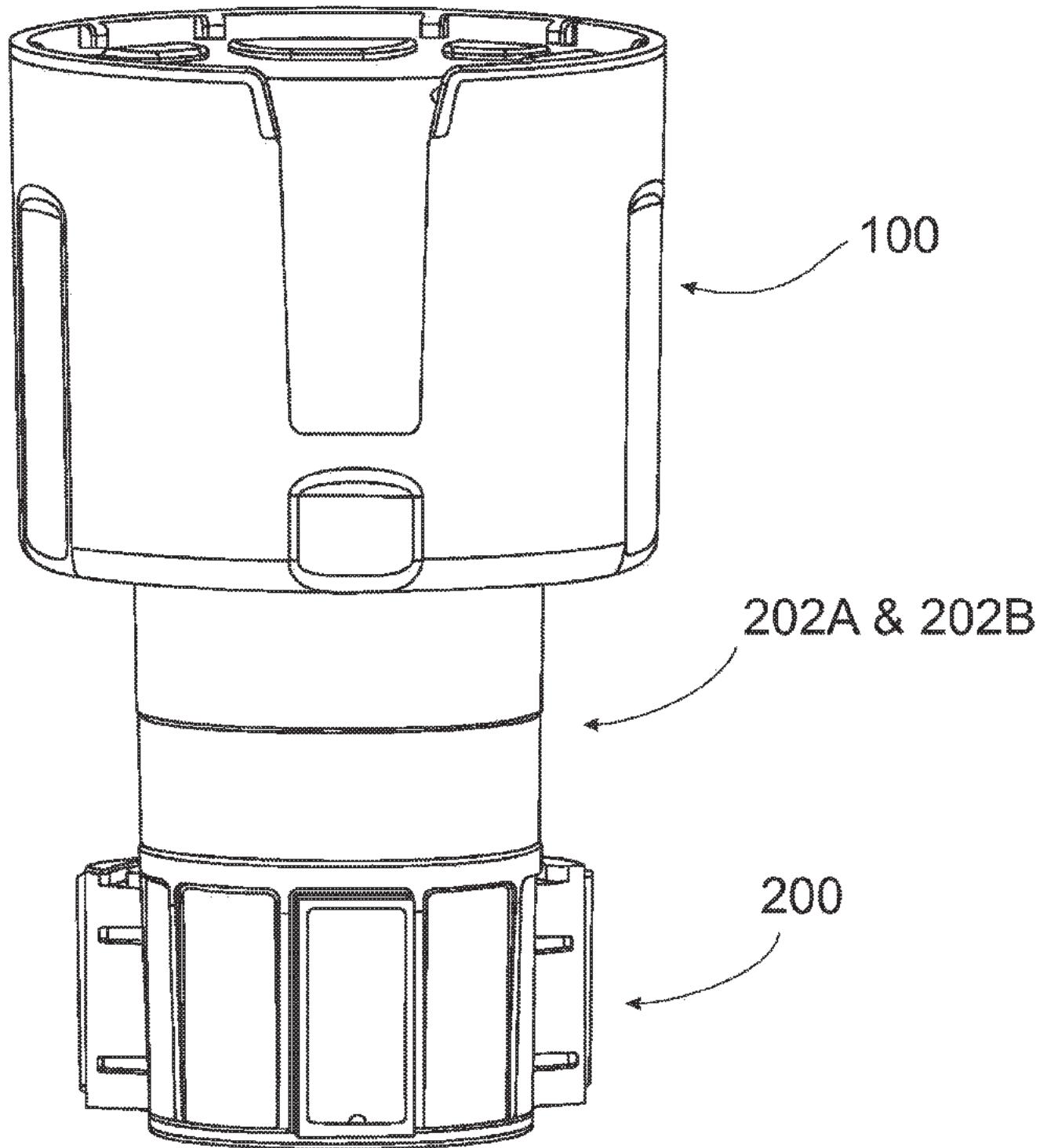


FIG. 22

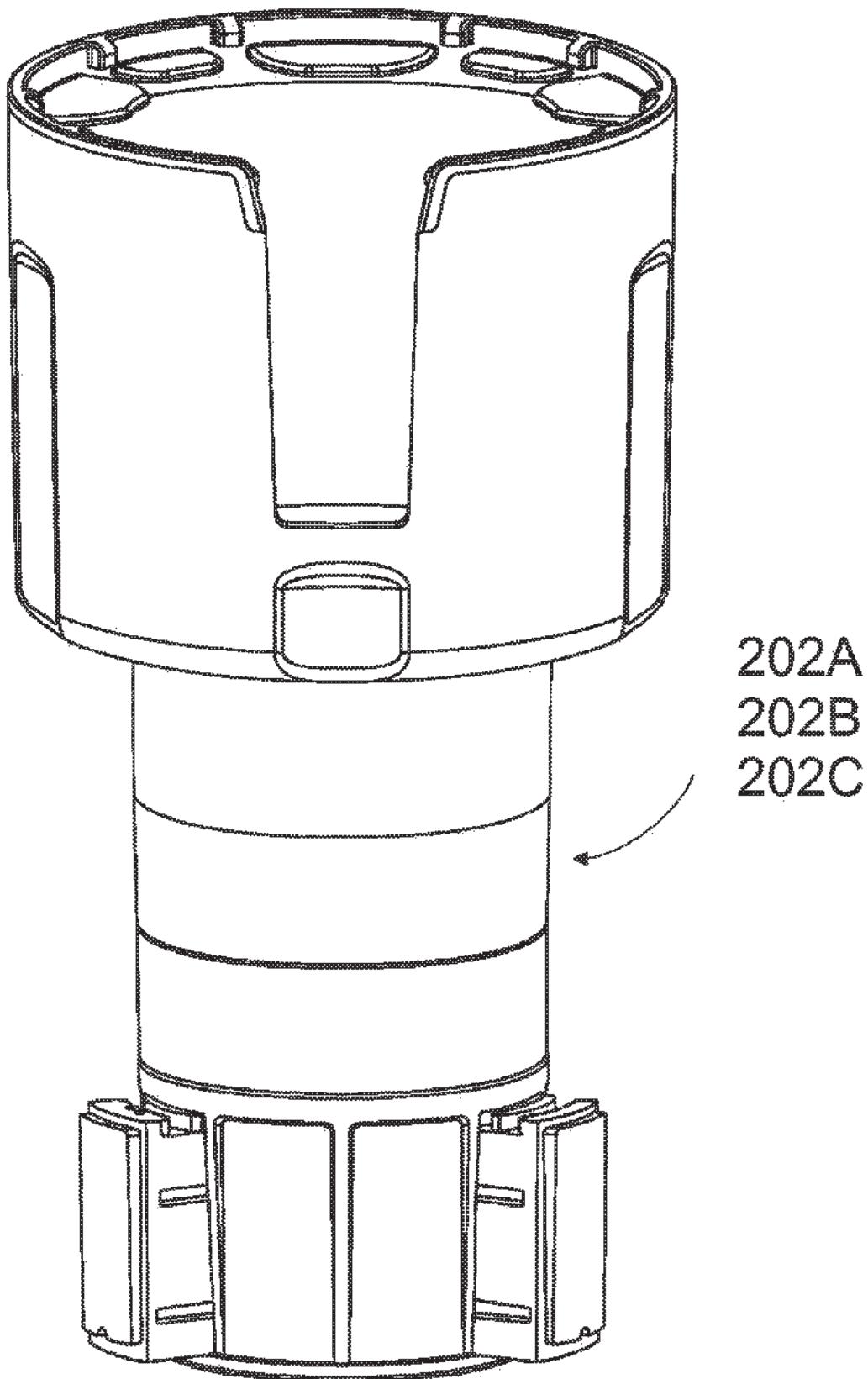


FIG. 23

PLA001244

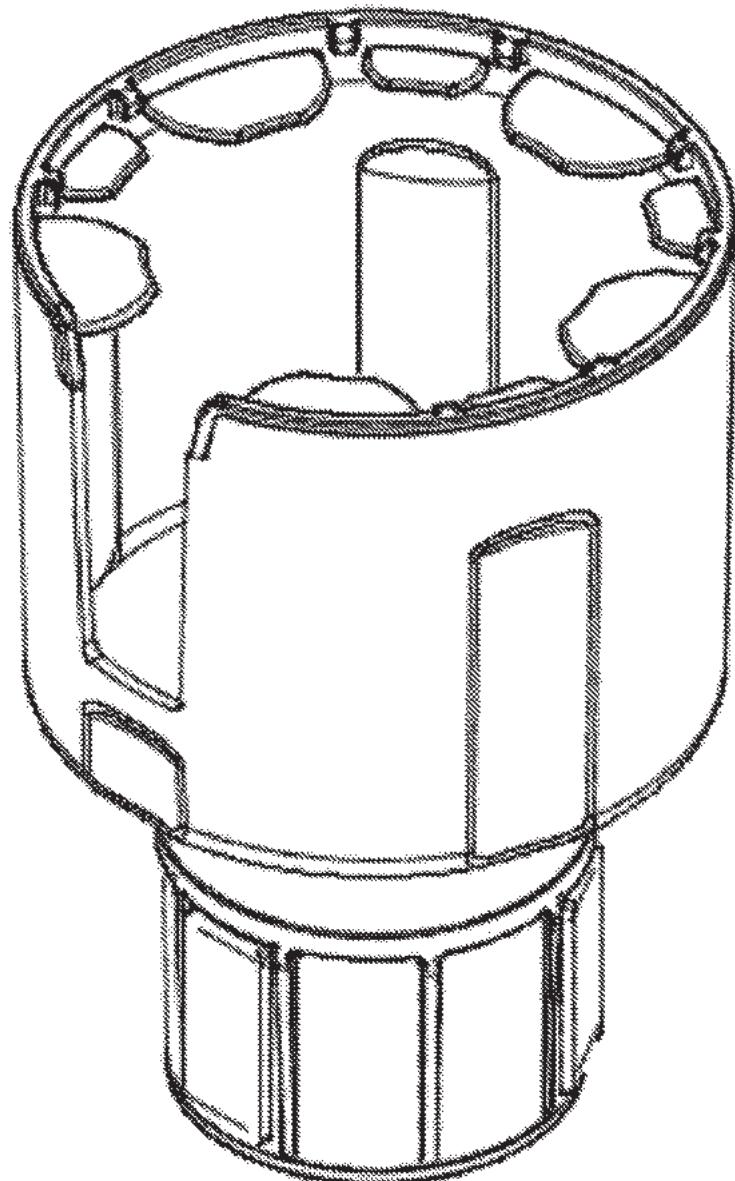


FIG. 24

PLA001245

EFS ID:	47682848
Application Number:	17592418
International Application Number:	
Confirmation Number:	7623
Title of Invention:	CUPHOLDER AND ADAPTER FOR LARGE CONTAINERS DURING VEHICLE USE
First Named Inventor/Applicant Name:	Benjamin Cook
Customer Number:	115322
Filer:	Christopher Dean Pilling
Filer Authorized By:	
Attorney Docket Number:	Cook.001
Receipt Date:	14-MAR-2023
Filing Date:	03-FEB-2022
Time Stamp:	19:12:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/Message Digest	Multi Part/.zip	Pages (if appl.)
1		175924180Aresponse.pdf	112665 b62a3b3c761f694a1325561a1a8ad0ee17b d3cc9	yes	7

PLA001246

Multipart Description/PDF files in .zip description			
Document Description		Start	End
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	3
	Claims	4	5
	Applicant Arguments/Remarks Made in an Amendment	6	7

Warnings:**Information:**

2	Drawings-other than black and white line drawings	ReplacementSheetV2_.pdf	1576125 f6e2c0a43dc26775b59b02c1fd701d80ffdc 5c23	no	16
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Warnings:**Information:**

Total Files Size (in bytes):	1688790
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Benjamin Cook

Application No.: 17/592,418 Confirmation No.: 7623

Filed: February 3, 2022 Art Unit: 3734

For: CUPHOLDER AND ADAPTER FOR LARGE CONTAINERS DURING VEHICLE USE

AMENDMENT RESPONSE TO NON-FINAL REJECTION

MS Amendment
Commissioner for
Patents

Dear Sir:

INTRODUCTORY COMMENTS

In response to the Office Action dated March 3, 2023, please amend the above-identified application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Drawings begin on page 3 of this paper.

Amendments to the Claims begin on page 4 of this paper.

Remarks/Arguments begin on page 6 of this paper.

Amendments to the Specification

Please amend paragraph [0044] as follows:

[0044] Referring now to FIGS. 8-13, various views of the attachment member 110 and spacer 202 are illustrated. The method of attachment between the cupholder 100 and adapter 200 will be described below. In one embodiment, the cupholder 100 includes an attachment member 110 positioned on a bottom surface of the cupholder. In one embodiment, the attachment member 100 includes four mounting holes 111, wherein the holes 111 are configured to align with a number of protrusions 210 provided in spacer 202. The hole/protrusion combination determines how the cupholder 110 sits on the adapter; i.e. centered or off-set. In one embodiment, the attachment member 110 is offset, wherein a mounting hole is positioned in the center of the bottom surface of the cupholder (best seen in FIG. 9). Best seen in FIGS. 11 and 13, in one embodiment, the central protrusion of protrusion 210 includes a hole 211 such that a fastener 500 (FIG. 6) (~~not illustrated~~) may be used to attach the cupholder to the spacer (and in turn the adapter). When the fastener is used, the other protrusions provide support with their connection to the corresponding mounting holes. In one embodiment, the fastener is a bolt, and a user would need to unscrew the bolt from the bottom of the cupholder 100, lift the cupholder off the spacer 202, and reposition the cupholder such that an "off center" hole on attachment member 110 is positioned over the center protrusion of protrusions 210 of the spacer. This action may enable the large and wide cupholder 100 to be securely positioned upright in the vehicle and not be blocked by the vehicle's console lid, emergency brake, gear shift, or other protruding component as shown in the arrangement of FIGS. 4-5. It should be understood, that although four mounting holes and eight corresponding protrusions are illustrated, the number of mounting holes and/or protrusions may vary.

Amendments to the Drawings

FIG. 6 was amended to include the element number of the fastener, represented by element number 500. No new matter is added. A Replacement sheet drawing is submitted herein.

Enclosures

Exhibit 6

GENERALLY | definition in the Cambridge English dictionary

dictionary.cambridge.org/us/dictionary/english/generally

Dictionary Translate Grammar Thesaurus +Plus Shop

generally English Grammar English-Spanish Spanish-English

Meaning of **generally** in English

generally

adverb

US /'dʒen.ərəli/ UK /'dʒen.ərəli/

Add to word list

B2

considering the whole of someone or something, and not just a particular part of him, her, or it:

- *Your health is generally good, but you do have a few minor problems.*
- *He wants more money to be given to the arts generally.*
- *I shall now develop my previous point more generally (= to say more about what it includes).*

B1

usually, or in most situations:

- *The baby generally wakes up three times during the night.*
- **generally speaking** *Well, generally speaking (= in most situations), Highway 101 has less traffic than the 405.*

B2

by most people, or to most people:

- *It was generally believed at the time that both men were guilty.*
- *The proposal has received a generally favorable reaction.*

Test your vocabulary with our fun image quizzes

Try a quiz now

More meanings of **generally**

– All

Generally Accepted Accounting Principles

See all meanings

WORD OF THE DAY

side order

UK /'saɪd ɔːdər/

US /'saɪd ɔːrdeɪ/

in a restaurant, an extra dish of food, for example vegetables or salad, that is served with the main dish, sometimes on a separate plate

Exhibit 7

Approximately Definition & More

Merriam-Webster

Dictionary Thesaurus approximately

Games & Quizzes Word of the Day Grammar Wordplay Word Finder More

Dictionary

Definition

Synonyms Example Sentences Word History Entries Near Show More

Save Word

approximately adverb

ap·prox·i·mate·ly (ə-ˈpräk-sə-mət-lē)

Synonyms of *approximately* >

: in an *approximate* manner

| an event in ancient history that can only be *approximately* dated
→ used to indicate that a stated number, amount, or value is an approximation

| *Approximately* [=around, about] 2,000 people attended the rally.
arrived at *approximately* 11:30 in the morning
During a lifetime, a person will take *approximately* 500 million breaths.
— Arthur S. Slutsky, M.D., et al.

Synonyms

about	around	like
more or less	much	near
plus or minus	roughly	say
some		

See all Synonyms & Antonyms in Thesaurus >

Quordle

W	O	R	D	Y
L	O	V	E	R
P	L	A	Y	S
D	A	I	L	Y

Can you solve 4 words at once?

Play

Approximate Definition & Mean +

merriam-webster.com/dictionary/approximate#h1

Dictionary Thesaurus approximate Search Games & Quizzes Word of the Day Grammar Wordplay Word Finder More

Merriam-Webster

Dictionary

Definition

adjective

verb

Synonyms

Example Sentences

Word History

Entries Near

Show More

Save Word 

approximate 1 of 2 **adjective**

ap·prox·i·mate (ə-'präk-sə-mət 

[Synonyms of approximate >](#)

1 : nearly correct or exact : close in value or amount but not precise

an *approximate* solution
an *approximate* date

2 : located close together

approximate leaves

approximate 2 of 2 **verb**

ap·prox·i·mate (ə-'präk-sə-,māt 

approximated; approximating

transitive verb

1 : to come near to or be close to (something)

a reproduction that *approximates* the original

2 **a** : to bring near or close

b : to bring (cut edges of tissue) together

intransitive verb

chiefly British : to come close → usually used with *to*

... the pigments on a palette can only *approximate* to the limitless range of colour in nature.

— *The Illustrated Dictionary of Art Terms*

Quordle

W	O	R	D	Y
L	O	V	E	R
P	L	A	Y	S
D	A	I	L	Y

Can you solve 4 words at once?

Play

Exhibit 8

A number of Definition & Mean

merriam-webster.com/dictionary/a%20number%20of

Dictionary Thesaurus a number of Games & Quizzes Word of the Day Grammar Wordplay Word Finder More

Dictionary

Definition

Example Sentenc...

Entries Near

Show More

Save Word

a number of *idiom*

: more than two but fewer than many : several

| There are *a number of* different options to choose from.

Examples of *a number of* in a Sentence

Recent Examples on the Web

In an unexpected way, this can make a connection that will, in time, be fruitful and make the no just one among ***a number of*** responses that build a successful rapport and a creative dialogue.

— Anna Jankowska, *Forbes*, 7 Oct. 2024

The storm could hit Florida as a major hurricane or weaken from ***a number of*** factors.

— John Bacon, *USA TODAY*, 7 Oct. 2024

However, over the years, Macy's has closed ***a number of*** store locations, and now operates fewer stores.

— Vicki M. Young, *Sourcing Journal*, 7 Oct. 2024

In nine visits to the site, Chatters found ***a number of*** bones that were parts of a nearly complete skeleton.

— Glynn Custred, *National Review*, 5 Oct. 2024

Quordle

W	O	R	D	Y
L	O	V	E	R
P	L	A	Y	S
D	A	I	L	Y

Can you solve 4 words at once?

Play

Exhibit 9

C A NUMBER OF definition and more X + collinsdictionary.com/dictionary/english/a-number-of

LANGUAGE TRANSLATOR GAMES SCHOOLS BLOG RESOURCES

≡ Collins a number of X Q

English French | German | Italian | Spanish | Portuguese | Hindi | More ▾

Summary Definitions Synonyms Pronunciation Collocations

Definition of 'a number of'

a number of

in American English

an unspecified number of; several or many

See full dictionary entry for number

Webster's New World College Dictionary, 4th Edition. Copyright © 2010 by Houghton Mifflin Harcourt. All rights reserved.

Examples of 'a number of' in a sentence

a number of

⚠ These examples have been automatically selected and may contain sensitive content that does not reflect the opinions or policies of Collins, or its parent company HarperCollins. We welcome feedback: report an example sentence to the Collins team. [Read more...](#)

There were a number of people in Cairo who would believe it.
ELIZABETH PETERS *HE SHALL THUNDER* I...

Synonyms of 'a number of'

several, a few, various

[More Synonyms of a number of](#)

Wordle Helper

Scrabble Tools

Quick Word Challenge

Question: 1 - Score: 0 / 5
BUILDINGS

Drag the correct answer into the box.



theatre

fire station

stadium

school

Next